

62 [1957]

# SEEDS

DESCRIPTIVE CATALOG

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**MICHAEL-LEONARD CO.**

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*Serving the Nation Since 1884*

with  
VEGETABLE  
FLOWER  
LAWN  
FIELD

# SEEDS



USE

**MICHAEL-LEONARD**



**TREATED SEEDS**



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(f)—Varieties recommended for freezing



# FOREWORD

This reference book has been revised in order that you can keep better informed on the new varieties that are being developed.

Gardening and lawn care is taking on a new significance. People are able, through the use of new chemicals and cultural practices, to achieve greater success in gardening and lawn care than was possible a short time ago. Not only do they enjoy an abundance of fresh vegetables, flowers and beauty at lower cost but they enjoy the satisfaction of doing it themselves.

Michael-Leonard Company is happy to have played a part in developing our share of new varieties. Probably no vegetable has been improved more than Sweet Corn. There are five Michael-Leonard All America winners included in our Hybrid Sweet Corn series ranging from 58 to 98 days in maturity (based on Midwestern day length.) No matter where you live, we urge you to take advantage of our counsel on Hybrid Sweet Corn whether it is for Canner, Freezer, Market or Home Gardener.

Michael-Leonard Company hopes you will find the information helpful in selling more seed. We realize that there is a large field to cover in a descriptive catalog like this and if there are varieties which you cannot find please feel free to contact us about them. We want you to feel that our research department, sales personnel and the whole backlog of experience of more than seventy-two years in the seed business are at your service.

## MICHAEL-LEONARD COMPANY

General offices at Sioux City, Iowa and Chicago, Illinois,  
with branches in the following States:

Idaho	Illinois	Oregon	Iowa
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## PRE-PACKAGED BULK VEGETABLE SEED

During the past few years we have seen a change in merchandising come into the seed industry. It's a change that can be expected because self-service is popular regardless of the type of merchandise one has to offer.

Michael-Leonard Company saw this change coming and was one of the pioneers in offering Pre-Packaged Bulk Garden Seed.

Our Beans, Peas and Corn are attractively packed in polyethylene bags. This gives the customer a chance to see the seed—which is what the customer prefers.

The advantages of Pre-Packaged seed are as follows:

1. **More profits** because you reduce the time required to package the seed and you have less waste.
2. **More sales** because people will buy pre-packaged seed on impulse due to attractive packaging and displays.
3. **More protection** because seeds cannot be accidentally mixed.

You can increase your seed profits by fast sales with less labor cost by selling pre-packaged bulk.

## ARTICHOKE

### LARGE GREEN GLOBE

Used for home garden planting and shipping; heads large, slightly elongated; scales thick at base. Quite different from Jerusalem Artichoke, which is grown for its tuberous root.

## ASPARAGUS SEED

### MARY WASHINGTON

The latest development of rust resistant asparagus; larger than the original Washington, with very tight tips of fine quality.

## BEANS — BUSH GREEN PODDED VARIETIES

**CULTURE.** Beans are easily frost killed, so plant them at corn planting time, on light, dry land. Hand cultivated beans can be drilled in poor soil as close as 18 inches, but in rich soil with machine cultivation, 30 inches is required. Drill 6 beans to the foot and cover one inch deep, or plant 4 beans to the hill, 18 by 24 inches apart. Two pounds of seed should plant 200 feet and 60 pounds an acre. Plant every other week for a succession up until August first in the latitude of Chicago. Frequently later plantings will turn out the best. Shallow cultivation only should be given at all times and do not cultivate when the plant is in bloom as the plant will drop its blossoms; never cultivate when wet, as it causes rust. Pick beans before the bulge of seed appears and pick them clean to continue the plants bearing. Number of days is from planting to first picking. Beans respond well to complete commercial fertilizer. Apply at planting time and again when they bloom.

### BOUNTIFUL

50 Days

Vine light green, 18 inch upright, strong growing bush. Stringless at all stages, somewhat inclined to be fibrous as pod ages. Exceptional cropper. Pod light green, average 7 inches long by ½ inch wide, thin and flat. Very meaty. Excellent market garden and shipping variety; also good for home garden when picked early. Seed pale yellow, medium large, kidney shape.

### BROAD WINDSOR, FAVA OR HORSE BEAN

70 Days

Plants dark green, 20 to 24 inches, tree type of growth with scant foliage. Pod shiny dark green, 4 inches long, thick and broad. Used as a green shell. Seed large, flat, odd shaped, dark yellowish color with a black eye.



## BEANS — Bush Green Podded Varieties — Continued

- BURPEE'S STRINGLESS GREEN POD (Landreth's Strain) (f)** 50 Days  
Plants large, very productive. Pods curved, round, 5½ to 6 inches long; medium to dark green, meaty, stringless and excellent quality in the younger stages. Is not resistant to common bean mosaic. Losing some of its popularity to newer varieties. Seed dark brown.
- COMMODORE IMPROVED (DWARF KENTUCKY WONDER)** 63 DAYS  
Bush is 16 to 18 inches tall, very prolific. Pods are round, slightly curved and twisted; refined round podded Kentucky Wonder type; tender, brittle, almost stringless and fiberless. Seed is mahogany red, slender kidney shape.
- CONTENDER (f)** 49 Days  
Pod—5½" x 7/16", semi-round. Flesh thick, fiberless and stringless, medium dark green. Plant—14 to 16 inches, vigorous, mosaic resistant, very prolific, pods borne low. Seed—Medium large, long oval, excellent for green shelled as well as snap beans.
- DIXIE WHITE** 52 Days  
Vines light green, 18 inches high. Pods light green, 4 inches long, round and straight; stringless when young. A most wonderful yielder. Excellent as a dry shell bean; flavor equal or better than Navy.
- GIANT STRINGLESS GREEN POD** 53 Days  
An excellent bean for the market gardener and shipper; and widely used for canning. Very heavy, stocky vine. Pods round, 6 to 6½ inches long, of exceptionally fine quality, stringless throughout entire growth. Seed deep yellow.
- HORTICULTURAL, DWARF** 54 Days  
Vine very productive, compact, upright, with large leaves. Pods 4 to 5 inches long, wide, thick, stringless with splashes of bright red on a yellowish ground. Seed large, oval, plump and nearly covered with splashes of bright red.
- HORTICULTURAL, TAYLOR** 55 Days  
A productive strain with strings, used mostly for green shelled beans which are ready in 62 to 65 days. Vine—medium height and vigorous. Pods—5½ to 6½ inches long, semi-round, stringy, light green in snap stage; turning white with splashes of crimson as it matures. Seed—color, buff with irregular spots of maroon, brown eye-ring, full oval shape, 1,090 per pound.
- SEMINOLE (f)** 50 Days  
This All American variety was introduced by the Florida Experimental Station. Plant is 18 to 20 inches, upright, sturdy and prolific. Resistant to mildew, rust and common bean mosaic. Pods 6 to 6½ inches long, slender, smooth, emerald green, stringless becoming fibrous in advance stages. Has a very "beany" flavor. Seed mottled brown with buff.
- SULPHUR OR BRIMSTONE** 54 Days  
Vines are similar in type to Burpee's Stringless Green Pod. Pods are semi-round to round, straight to slightly curved, stringy, fairly free from fiber, light green, beans prominent in pods. Seeds are small, thick, short oval, bright sulphury yellow with faint greenish or brownish eyespot.
- TENDERGREEN** 53 Days  
Michael-Leonard's new strain of this variety developed by hybridizing and selection is mosaic resistant. Vine medium light, 18 inch bush, upright with good leaf growth. Pods light green, 6 inch average, straight, round, crisp, meaty, stringless and without fiber. Very fine flavor. One of the best all around varieties. Seed brown mottled, splashed with buff.



**BEANS — Bush Green Podded Varieties — Continued****TENDERLONG 15 (f)****53 Days**

A new Tendergreen type. Plant 17 to 18 inches tall, strong and vigorous. It is resistant to common bean mosaic. Pods 6 inches long, round, straight, crisp and stringless without fiber. Flavor is good. Seed is purple splashed with buff.

**TENNESSEE GREEN POD OR BROWN BUNCH****52 Days**

Vine dark, 12 inches, lazy sprawling growth, large leaves. Pods medium light, 6 to 8 inches, curved, wide, flat, very thin when fit, become knobby with deep indentures between seeds as pod ages; crisp, tender, stringless when young, developing string later. Seed dark brown, medium large, wide, flat.

**TOP CROP — ALL AMERICA, 1950 (f)****52 Days**

An improved strain of Top Crop that has smoother pods placed higher off the ground. Pods are medium light green, 5½ to 6 inches long, round, meaty and crisp. Strictly stringless and fiberless up to advanced stages. Seed mottled brown and white. Resistant to greasy pod and common bean mosaic. Plant medium large with leaf similar to Refugee, 15-16 inches tall.

**BLACK VALENTINE, STRINGLESS****50 Days**

Plant large, erect, prolific. Pods long, practically straight, oval, of good color and texture and is completely stringless. Seed oval, black. Popular with shippers and market gardeners.

**RED VALENTINE, STRINGLESS****54 Days**

Plant medium size, erect, very productive. Pods 4 to 4½ inches long, medium green, round, curved, slim with crease in back; stringless; very fleshy, crisp and tender. Seed purplish red, splashed with pale buff.

**VERMONT CRANBERRY****60 Days**

Pods 4 to 5½ inches long, yellow green splashed with scarlet.

**WADE — ALL-AMERICA, 1952 (f)****55 Days**

New stringless green pod bean. It grows upright and keeps its pods well off the ground. Pods are round, long, straight, slender, stringless, comparatively free from fiber and of a dark green color. Is ideally suited for shipping, canning or freezing.

**WHITE HALF RUNNER****60 Days**

A popular variety in the mountain areas of the mid-south and southeast; used mainly for home gardens for snap and shelled beans. Vine—bushy, vigorous and productive with short runners. Pods—4 inches long, ¾ inches wide, round, medium light green, stringy and fibrous at full size, but has a distinctively good flavor. Seed—pure white, oblong, round cross section, medium size, 2,500 per pound.

**BEANS — FIELD OR SHELL****GREAT NORTHERN OR LARGE WHITE NAVY****100 Days**

Vine a medium dark color, 14 to 18 inches, rank, heavy growth with short tendrils. Pods medium dark, 3 inches long, flat and straight. Very heavy cropper. Grown mostly in the northwestern states as a commercial white dry bean. Larger, heavier growth and a heavier producer than the old Michigan Navy, but is not equal in quality. Seed white, medium small.

**KIDNEY, DARK RED MAHOGANY****96 Days**

Vine dark colored, strong growing, upright 18-inch bush with a rather scant growth of large leaves. Pods dark, 5 inches long, wide, flat, straight, stringy, fibrous and unfit for snap use. Used as a dry shell bean in the commercial market. Seed dark red, medium large, flat, kidney shaped.



## BEANS — Field or Shell — Continued

- KIDNEY, IMPROVED WHITE** 100 Days  
Vine dark, 18 inches, strong growing bush with a rather scant growth of large leaves. Pods dark, 4 inches, wide, flat, straight stringy and fibrous at all stages. Is not a snap bean type. Used as a dry shell bean. Seed pure white, medium large, kidney shaped.
- MARROW, LARGE WHITE** 100 Days  
Vine medium dark, 16 to 18 inches, heavy, strong growing, short runner type. Pods medium dark, 4 to 5 inches long, wide, flat, straight, stringy and fibrous. Used as a dry shell commercial bean. Seed pure white, medium large, rounded oval.
- NAVY** 100 Days  
Vine medium dark, 16 to 18 inches, strong growing, short runner type. Pods light green, 3 inches long, flat, straight, medium broad. Dry shell commercial bean. Above is description of the original Michigan Pea bean. Seed pure white, small, oval.

## BEANS — BUSH WAX PODDED VARIETIES

- BLACK WAX, PENCIL POD (f)** 53 Days  
Plant large, vigorous, upright. Very dependable producer. Pods golden yellow, 5 to 6 inches long, round, curved; very meaty, stringless and of excellent flavor. Some fiber in older beans. Seed black.
- CHEROKEE WAX (VALENTINE WAX)** 50 Days  
Resembles Stringless Black Valentine except for color of pod. Plant large and erect, pods golden wax, oval, nearly straight, stringless, tender and of good quality, seed black.
- GOLDEN WAX, IMPROVED (TOP NOTCH)** 50 Days  
Vine medium light, 14-inch, strong, sturdy bush with a medium heavy leaf growth. Pods a fine deep waxy yellow color, four inches, straight, wide, thick, flat, stringless, considerable fiber as pod ages, very well flavored. Seed white splashed with mottled red around eye and end of seed.
- KINGHORN WAX (WHITE SEEDED BRITTLE WAX) (f)** 54 Days  
Similar to Brittle Wax from which it was selected. The pure white seed color is favored by some canners. Vine large, bushy, with medium large leaves, medium dark color, erect, upright growing. Pods 6 inches long, round, slightly curved, deep yellow, stringless.
- ROUND PODDED KIDNEY WAX OR BRITTLE WAX (f)** 52 Days  
Plants are of strong growth, spreading and very productive. The leaves are large, broad and roughened. Pods are round, 5½ inches long, slightly curved, light yellow, waxlike, stringless and of the very best quality. Seed white with black eye, kidney shaped.

## BEANS — BUSH LIMA VARIETIES

**CULTURE.** Lima Beans require even more heat than other Beans. They should not be planted until the ground is thoroughly warmed. Bush Limas should be sown on good garden soil in 2 to 3 ft. rows, 3 to 6 inches apart, eye down, cover 1 inch if planted in light soils, less in heavy soil. One pound will plant 50 to 60 feet. Pole Limas are more tender than the Bush Limas. Set 6 ft. poles, 4 feet each way and drop 4 to 6 beans, eye downward around each pole, thinning to 3 plants when up.

- BURPEE'S IMPROVED BUSH** 75 Days  
Similar to Burpee's Bush Lima, but slightly earlier and longer Podded. Plant large, erect, vigorous, very productive; pods contain four to five seeds. Dry beans, large, plump, flat-oval, surface somewhat wrinkled, color white with greenish tinge.



**BEANS — BUSH LIMA VARIETIES — Continued**

- FORDHOOK BUSH (f)** 75 Days  
Vines strong, erect and true bush lima growth. Foliage heavy and very dark green in color. The stalks that produce the blossom are thrown out from the lateral and main stalks. Pods are large, thick, containing three to five beans. The most popular market gardeners' lima bean.
- FORDHOOK No. 242 (f)** 75 Days  
Plants similar to Fordhook but with greater spreading habit and somewhat earlier. Pods  $3\frac{1}{2}$  to 4 inches with 3 to 4 beans per pod. Yields well under adverse conditions.
- CANGREEN — GREEN SEEDED HENDERSON (f)** 68 Days  
Pods and bush are identical with Henderson Bush Lima. Seed has the same appearance as Henderson, but fleshy part of seed or cotyledons are green instead of yellow as in all other limas in dry seed stages.
- HENDERSON'S BUSH OR DWARF SIEVA (f)** 66 Days  
Our stock is the true Henderson's Bush Lima and not the common Baby Lima. Plants bushy, very productive. Pods flat, 3 inches long, containing three to four seeds. Green shelled beans small, flat and of excellent quality.
- JACKSON WONDER OR CALICO** 66 Days  
Vine dark, 12 inch, thick bush with heavy leaf growth. Pods dark,  $\frac{3}{4} \times 3$  inches, flat, medium thin. In every way is like the Henderson's Bush except in color of seed. Seed light buff, purple speckled. Heavy yielder.

**BEANS — POLE LIMA VARIETIES**

- CAROLINA SMALL WHITE OR SIEVA** 76 Days  
Vines vigorous, with many short branches so that they are sometimes grown without poles; very early and productive, bearing short pods, which are thin and curved. Seed white, flat.
- FLORIDA BUTTER OR SPECKLED POLE** 80 Days  
Vine medium heavy. Pod medium dark, 3 to  $3\frac{1}{4}$  inches long, thin, flat. Green shelled beans, pale creamy white color, fine flavor. In the Sieva class with a colored seed. Seed cream, purple speckled, medium small.
- LEONARD'S IMPROVED FLORIDA BUTTER POLE** 80 Days  
A distinct variety. Pods large, beans very tender and of excellent quality. Heavy yielders. Seed is more than double the size of Florida Butter, very striking in appearance, creamy white, mottled with purple.
- KING OF THE GARDEN (LARGE WHITE LIMA)** 88 Days  
The old standard market and family sort. The vine begins to produce pods at the foot of the pole and the bearing season continues until frost. Pods large and well filled with beans of mammoth size.
- WILLOW LEAF POLE** 85 Days  
Very similar to Sieva but with narrow, willow-like leaves and thus more resistant to the conditions of hot and dry weather in those sections of the South where it is grown.

**BEANS — POLE OR RUNNING VARIETIES**

**CULTURE.** On well enriched soil, set firmly in the ground every 3 or 4 feet each way, poles that are, when set, about 6 feet high. Some time after bush beans are planted, plant six or eight pole beans one inch deep near the base of each stake and later thin to three or four plants to the pole. Thirty pounds of pole beans generously plants an acre and one round plants one hundred hills. The pole bean bears over a longer period than the bush bean and is generally considered of superior quality but it requires more labor, longer time to mature and is more sensitive to adverse climate and soil conditions. Side dressing with compete commercial fertilizer desirable when first blooms appear.



**BEANS — POLE OR RUNNING VARIETIES — Continued**

- BLUE LAKE STRINGLESS** 64 Days  
Pods are round, slightly curved, tender, fleshy, stringless and fiberless, medium green; used in canning and freezing. Vines are 4 to 5 feet tall. Seeds are entirely white and small oval in shape.
- CREASEBACK, STRIPED OR SCOTIA** 72 Days  
A very hardy and productive cornfield Bean. Pods dark green, 6½ to 7 inches long, round straight and creasebacked; slightly stringy, very fleshy, fine grained, attractive and of good quality. Seed light tan, black striped.
- BLUE RIBBON CREASEBACK** 69 Days  
An early Striped Creaseback type. Yields well and is tender when young. Pods 4 to 4½ inches long, round, light green, fleshy and stringless in early stages. Vine 4½ to 5½ feet tall. Blossom is almost white, slight purple tinge.
- CREASEBACK, WHITE** 63 Days  
An extremely early Pole Bean. Vines small to medium and wonderfully productive, bearing pods in clusters of from 4 to 12 and medium in length. An excellent shipper. Seed small oval, white.
- CUT SHORT, RED SPECKLED OR CORN HILL** 73 Days  
A fine variety for planting with Corn, 5½ to 6 feet tall; pods 4 inches long, straight, thick, crisp when young. Seed grey, red speckled, small, oval.
- GENUINE CORNFIELD** 71 Days  
Pods round, straight to slightly curved, stringless while young, moderately fibrous, fleshy, medium green becoming purple splashed. Seed oval, tan with irregular brown mottling and stripes.
- HORTICULTURAL CRANBERRY—LONDON HORTICULTURAL** 70 Days  
Vines moderately vigorous, bearing short, broad, pale green pods, becoming streaked with bright red as they near maturity. Beans large, ovate and splashed with red. Used either green or in the dry state.
- KING MAMMOTH PODDED HORTICULTURAL OR WORCESTER POLE** 75 Days  
Vine medium dark, heavy growing pole, leafy. Pod medium dark, 5 inches long, wide, thick. Largest of the horticultural family. Pods can be used as snaps if taken soon enough; best as a green shelled bean. Seed light tan, red speckled, medium large, nearly round.
- IDEAL BLACK POLE (IDEAL MARKET)** 58 Days  
Earliest and most prolific of the green podded pole beans, being a full week earlier than Kentucky Wonder. Pods 5 inches long, round, slightly curved; stringless and borne in clusters of six; very tender, pulpy and excellent in quality. Seeds black.
- MICHAEL-LEONARD'S STRINGLESS KENTUCKY WONDER** 64 Days  
This new variety is essentially a strictly stringless and fiberless type of Kentucky Wonder which it resembles strongly. Pods round, slightly curved, meaty and strictly stringless and fiberless at all stages. Flavor delicious, similar to Kentucky Wonder. Seed is medium brown, long oval shape.
- KENTUCKY WONDER OR OLD HOMESTEAD** 65 Days  
Vines vigorous, climbing well, and very productive, bearing its pods in large clusters; blossoms white; pods green. Stringless, 8 to 9 inches long; nearly round when young and very crisp, although at maturity they become irregular and spongy. The dry beans are long, oval, dun-colored.



**BEANS — POLE OR RUNNING VARIETIES — Continued****KENTUCKY WONDER WHITE SEEDED OR  
BURGER'S STRINGLESS****64 Days**

Pods 6 to 7 inches long, round, slender and straight; very tender, fleshy and stringless of high quality. Color dark green. Seed oval-flat, white.

**KENTUCKY WONDER WAX****68 Days**

Vine medium dark, heavy growing pole type, heavy leaf growth. Pods fine, wax color, 8 inches long, round when young, curved, very meaty, crisp, stringless when young, and without noticeable fiber. As pods age there is a trace of fiber, slight string, and they become somewhat saddlebacked. Very heavy bearer over a long period of time. Seed reddish brown, medium large, oval-flat.

**LAZY WIFE****72 Days**

Vine medium dark, quite a heavy growing pole type, with a fair leaf development. Pods medium light, 6 inches long, broad, flat, straight, stringless, very little fiber, meaty, crisp and well flavored. Good for snaps, green shell and dry shell. Seed white, medium small, nearly round.

**McCASLAN'S POLE****65 Days**

Vine medium dark, strong growing pole type, with good leaf growth. Pods light, 8 inches long, flat, medium thick, broad, stringless when young, crisp, fiberless and well flavored. Makes a good snap when young, fine green shell and a fair dry shell. Seed white, medium small.

**MISSOURI WONDER OR NOXALL****66 Days**

Vine medium light, strong growing pole type, with good leaf development. Pod light green, 6 inches long, round slightly curved, crisp when young but tough and stringy at all stages. Seed grey, brown speckled, medium small.

**TENNESSEE WONDER****71 Days**

Somewhat similar in habit to Kentucky Wonder but with immensely larger, straighter, smoother and more creasebacked green pods. More suitable as a shell than snap bean. Seed slate-grey, black striped.

**BEET — FOR THE TABLE**

**CULTURE.** As soon as the soil can be worked in spring, sow beet seed in 12- to 18-inch rows for hand cultivation or 18- to 30-inch rows for machine cultivation, dropping 12 seeds to the foot. Cover the beet seed one-half inch. Later, thin the Beets to 3 to 4 inches apart. Planted April 1st the early varieties should be marketable June 1st or the crop may be advanced several weeks by starting under glass and transplanting to the open, first giving the beet tops a severe pruning. Use 1 ounce of seed to 75 feet of row and 6 pounds to the acre. Beets sown in early July should be ready to store in pits or in sand in the cellar when freezing weather begins. Number of days is from planting to edible root.

**BLOOD TURNIP, EARLY IMPROVED****60 Days**

An extra selected stock of Blood Turnip having larger, coarser tops and roots than the Detroit Dark Red and requiring a considerably longer time to mature. Excellent for summer and autumn use.

**DETROIT DARK RED****55 Days**

An outstanding variety for truckers, produce shippers and canners. Tops medium, dark green tinged with red. Roots globular. Color deep ox-blood red. Flesh dark red with indistinct lighter red zones. Fine quality, sweet and tender.

**FOR BETTER RESULTS INSIST ON POWER-PAK SEEDS.**



## BEET — FOR THE TABLE — Continued

### PERFECTED DETROIT

55 Days

A mid-season variety. Tops tall, green and red. Roots globular, medium smooth, deep red; flesh dark red with somewhat lighter zones; of good quality. Adapted to the uses of market gardeners and canners.

### EARLY WONDER

55 Days

Roots very uniform, nearly globe-shaped with small top and tap root; skin dark red, flesh deep blood red with little zoning. Popular with market gardeners for early or late planting.

### EGYPTIAN, MICHAEL-LEONARD'S DARK RED

50 Days

The best stock of Egyptian Beet on the market today. It is dark red, free from light zones, early and an excellent beet in every way.

### EGYPTIAN, CROSBY'S

50 Days

An extra early variety especially adapted for the market gardener and home garden. Roots average 3 inches, of dark red color and almost globular; flesh distinct vermilion, which it retains in cooking. Pleasing sweet flavor. Tops medium.

### EGYPTIAN, EARLY FLAT

48 Days

Large, upright, dark red leaves with green tint. Roots a very deep, dark red, flat, thick, sometimes inclined to be rough and irregularly shaped. Usually clean and free of fiber roots. A small tap root. Cut flesh shows a very deep dark color with very faint zoning of slightly lighter red.

### LUTZ GREEN LEAF

75 Days

A medium late variety for home use. Tops small, glossy green, with pink mid-rib. Roots half long, top-shaped; dark, purplish red. Flesh deep blood red with indistinct zones. Good quality and an excellent keeper.

## SWISS CHARD

### SWISS CHARD, LUCULLUS

55 Days

An improved type of Chard. Of more upright growth than the Silver variety; leaves yellowish green, much crumpled and curled, mid-rib and veins white, stalks thick, broad and flat and as large as rhubarb.

### SWISS CHARD, SILVER

55 Days

Light green, blunt spear head leaf on a short stem, slightly lighter stem and vein. Makes a thick, heavy growth for cut-and-come-again greens. Grows 18 to 20 inches tall. Leaves usually quite smooth; sometimes slightly savoyed.

### SWISS CHARD, FORDHOOK GIANT OR

#### DARK GREEN WHITE RIB

55 Days

Very broad, thick, heavy, short white stem and a large, broad, thick, very much crumpled and savoyed spear shaped leaf, growing to 26 and 28 inches tall. Leaves very glossy and waxy looking; upright growth. Best of all the chards; leaves make the most tender of greens and the broad white stems used as asparagus are excellent.

## BEET — MANGEL WURZEL

Plow deep for this crop and in May or June plant six mangel seed to the foot in two or three foot rows, later thinning to a nine inch stand. One ounce sows one hundred feet of row and six pounds an acre. When a light frost has occurred, lift the roots and store in pits or cellars.

### GIANT HALF SUGAR ROSE — For Feeding

90 Days

This unites the large size of the mangel with the greater feeding value of the sugar beet. The roots average 10 to 12 inches and the outline is that of a broad, thick wedge, the upper portion of a soft bright pink, shading lighter toward the bottom where the lower portion for about one-third the length is white.



## BEET — MANGEL WURZEL — Continued

### IMPROVED MAMMOTH LONG RED

108 Days

The largest and most productive Mangel. Roots 5 inches thick, 15 inches long, tapering to a point. Grows half above the ground. Color light red.

### GIANT SLUDSTRUP OR YELLOW INTERMEDIATE

110 Days

A good cropper and of high feeding value. Roots long, oval, reddish yellow; grows half above ground, easily harvested. Flesh white tinged with yellow.

## BROCCOLI

### GREEN ITALIAN SPROUTING

60 Days

A distinct variety of the sprouting type. It forms a large head consisting of a cluster of bluish-green flower heads. When this central head is removed the plant develops numerous lateral sprouts, each of which produces a small head. These are cut, leaving about 6 inches of the stem, and are tied in bunches for market. Both stems and heads are cooked and served like cauliflower.

## BRUSSELS SPROUTS

One of the most delicious garden vegetables. Plant in 3-foot rows, 1½ to 2 feet apart. One ounce will produce about 5,000 plants. Cultivate same as cabbage. Autumn grown sprouts, drilled in May and transplanted in July, generally do the best, as the plants are quite hardy and the buds mellow under frost.

### DWARF IMPROVED

75 Days

Grows 18 to 30 inches high, producing compact sprouts 1 to 2 inches in diameter; grayish green in color. Hardy, early.

## CABBAGE

**CULTURE.** Cabbage plants, when properly hardened by gradually being brought to a low temperature and the quantity of water in them diminished, will stand any frost and some considerable freezing. Yet a cabbage plant raised at a high temperature and full of water will be killed by even a light frost. Cabbage can be grown by planting the seed heavily where the crop is to grow and thinning the plants but a better practice is to raise the plants without crowding, in a seed bed, which is not richer than the fields to which the plants go. Transplant, if possible, on a cloudy day, watering the plants if the soil is dry. For early Cabbage, sow seed in hotbeds in February, transplant to cold frames in March and set outside in April or sow seed out-of-doors as soon as the soil can be worked in the spring, covering the seed one-third inch deep. All vegetable plants are best when grown without check, so let as much soil adhere to the roots of the plant in transplanting as will hold and set up to the first leaf. At this time the plants should have 4 or 5 pairs of leaves and be 4 to 6 inches high. Set small varieties to be worked by hand as close as 18 inches, while large, late varieties, horse cultivated, need 30 or more inches. If heads are so early as to begin bursting, push the head to one side far enough to tear off the roots on one side. Cabbage grows successfully on a wide variety of soils and experience points to liming, deep plowing and heavy manuring as successful practices. The number of days given is the time required from setting plants to mature heads.

### CHARLESTON LARGE WAKEFIELD

72 Days

About a week later than Early Jersey Wakefield and 50 percent larger.

### CHINESE — CHIH LI

75 Days

Earliest and most sure heading of the Chinese varieties. Plant of upright growth, producing long, solid, white cylindrical heads, 3 to 4 inches thick, 18 to 20 inches in length. Leaves very broad, smooth, fringed on edge, with broad, white mid-rib. Superior quality.

### HERE'S WHAT POWER-PAK DOES:

Preserves Seed Vitality  
Protects Against Disease

Produces Better Stands  
Promotes Stronger Plants



## CABBAGE — Continued

- CHINESE — MICHIHLI** 70 Days  
 Outstanding uniformity makes this a great improvement over the former strains of the Chihli type. Foliage dark green; heads 4 inches thick, 18-20 inches tall, tapered near tip; firm, well blanched, crisp and tender.
- CHINESE — WONG BOK** 80 Days  
 The heads of this variety are shorter and thicker than Chihli, the incurving leaves producing a tighter, more compact head.
- COPENHAGEN MARKET** 65 Days  
 One of the finest early round-headed cabbages in cultivation. The heads average about four pounds each in weight, are hard and solid with small core. The quality is extra fine and sweet. It is a short stemmed variety, the heads nearly resting on the ground. The leaves are light green, rather small, saucer-shaped and tightly folded, making it possible to set them close together in the field.
- DANISH BALL HEAD** 110 Days  
 Most widely used and best type of late cabbage; desirable for storage and for shipping. Plant fairly large, sturdy, with short stem. Heads deep, round, very hard; interior decidedly compact. Tender, crisp; flavor good.
- EARLY DWARF FLAT DUTCH** 70 Days  
 An early Cabbage of good size. Heads are flat and very solid.
- EARLY JERSEY WAKEFIELD** 64 Days  
 One of the most popular extra early varieties. The plants are compact, erect, with few outer leaves, and withstand cold and unfavorable weather well as they are very hardy. Heads medium size, cone-shaped and solid. Our stock has been carefully selected.
- GLORY OF ENKHUIZEN** 80 Days  
 This is an excellent mid-summer variety. Makes a nice large head, has few outer leaves and can be planted close. Very popular with kraut packers and market gardeners.
- GOLDEN ACRE** 65 Days  
 A selection from the earliest strain of Copenhagen Market. It is a few days earlier, is a somewhat smaller plant and has a slightly smaller head than the Copenhagen Market. Very solid, fine grained and exceptionally well flavored. It is the best of the first early round-heads for early market and shipping use.
- PENN STATE BALL HEAD** 110 Days  
 A late variety, excelling in productivity and uniformity. Plants medium with short stem. Heads attractive, flattened globe, extremely hard, 6 to 7 inches deep, weighing 5 to 6 pounds.
- PREMIUM LATE FLAT DUTCH** 102 Days  
 This variety of late Cabbage is a standard in all sections for winter use. It makes a large, solid, flat head, which keeps long without bursting and is adapted to a more varied climate than probably any other variety.
- IMPROVED AMERICAN SAVOY** 87 Days  
 Closely approaching the cauliflower in delicacy and delicious flavor. The best of all Savoys for general market or home use. It has a short stump, grows to a large size, is compact and solid—a sure header.
- RED, ROCK MAMMOTH** 105 Days  
 The largest heading of any red sort. Heads are hard, of deep red color, quality excellent.

**POWER-PAK MAKES GOOD SEED BETTER!**



## CABBAGE — YELLOWS RESISTANT VARIETIES

- ALL SEASONS YELLOWS RESISTANT** 92 Days  
Yellows resistant strain of All Seasons. Not quite as uniform and coarser in texture.
- BUGNER'S** 120 Days  
A winter Cabbage which has been and still is the most popular late variety around Chicago. It makes very large, somewhat flattened heads which are extra hard and solid. The variety is, furthermore, greatly resistant to "yellows" disease.
- GLOBE OR GLORY OF ENKHUIZEN YELLOWS RESISTANT** 80 Days  
An excellent yellows resistant selection of Glory of Enkhuizen. Heads large, round and solid.
- RESISTANT GOLDEN ACRE (Detroit)** 65 Days  
A Golden Acre type from Denmark into which yellows-resistance has been bred. Medium small, round heads.
- JERSEY QUEEN** 65 Days  
A yellows resistant strain of Jersey Wakefield.
- MARION MARKET OR COPENHAGEN MARKET YELLOWS RESISTANT** 75 Days  
Yellows resistant strain of Copenhagen Market. Larger leaves and more spreading. Larger and later maturing round heads.
- WISCONSIN BALLHEAD** 100 Days  
Heads very hard, smaller but more uniform and smoother than Wisconsin Hollander, short stem, blue-green leaves.
- WISCONSIN No. 8 YELLOWS RESISTANT** 110 Days  
Similar to Danish Ball Head but not as uniform.
- RED HOLLAND, YELLOWS RESISTANT** 100 Days  
A red cabbage with medium sized round, uniform heads; excellent for shipping or storing. Yellows Resistant.

## CANTALOUPE AND MUSKMELON

**CULTURE.** For muskmelons follow our cultural directions for cucumber except that where a robust growing variety of muskmelon is grown, a space of as much as six by six feet is sometimes required between hills. One ounce of seed plants fifty hills and three pounds plants an acre. The crop, or the last planting for a succession, should be in June. While not necessary it is advisable to pinch off the branches of muskmelon if a quicker matured or a larger or a better fruit is required. Pick the melon when it parts from the stem without difficulty and store a few days in a cool room. Number of days is from planting to ripe fruit.

- BANANA** 96 Days  
Fruits 3 x 14 inches, long slim, tapered, slightly ribbed and tapered to both ends. Yellowish green to yellow as it ripens. Flesh is thick, salmon in color; small seed cavity, and if picked just as it ripens it is very well flavored.
- BENDER'S SURPRISE** 94 Days  
Fruits 8 x 7½ inches. It is the largest of the pink fleshed melons of oval shape, early for a melon of this size. The flesh is of exceptionally high quality. It has coarse netting, distinct ribs and the rind is very hard, enabling it to be shipped some distance.
- HACKENSACK, EXTRA EARLY** 82 Days  
Medium to large sized, nearly round or somewhat flattened, evenly and deeply ribbed, with very coarse netting. Skin is green, slightly tinged with yellow as the fruits mature. Flesh is green, a little coarse but juicy and sweet.



## CANTALOUPE AND MUSKMELON — Continued

### HACKENSACK, LARGE OR TURK'S CAP 90 Days

A very large, green-fleshed melon. The vines are hardy, vigorous and productive. The fruits are nearly round, usually somewhat flattened; ribs are large and of irregular width, densely covered with coarse netting.

### HALE'S BEST, NO. 36 83 Days

Fruit 5 x 5½ inches, nearly round, very lightly ribbed, finely netted, green shading to light yellow as it ripens. Flesh thick, firm, stringless and very well flavored; not too sweet. Very small seed cavity with tight web of a salmon pink color. An exceptionally fine early strain for long distance shipping purposes.

### HALE'S BEST, JUMBO STRAIN 83 Days

Fruits oval. 5-6 pounds; ribbing somewhat prominent, heavily netted. Flesh thick, salmon-orange, sweet and of excellent quality; seed pocket rather large.

### HONEY DEW 113 Days

The fruits are round and slightly oval, 6 to 8 inches in diameter, and weigh about 6 to 8 pounds. The skin is smooth and when ripe is creamy yellow in color; flesh light emerald green, fine grained and of very sweet, sugary flavor. Rind thin but very firm, and the fruit stand shipping remarkably well.

### HONEY ROCK OR SUGAR ROCK 85 Days

Fruit 5 to 5½ inches, nearly round, no ribs, coarsely netted, grey-green to light yellow as it ripens. Flesh is very thick, tender, salmon pink in color and very well flavored. Very small seed cavity. This is a new type that has become very popular with home market gardeners.

### HOODOO OR HEARTS OF GOLD 90 Days

Fruits 5 to 5½ inches, nearly round, very slightly ribbed, finely netted, light green to light yellow as it ripens. Flesh is very thick, firm and delicious. Very small seed cavity with a tight web. Color a bright yellow shading to pink. Stands shipping very well.

### MILWAUKEE MARKET 87 Days

A medium large, early maturing, pink fleshed melon with excellent eating qualities. The ribs are fairly prominent and the netting is very heavy. The shape is slightly oval, the rind extremely hard, making it an excellent shipping variety.

### OHIO SUGAR 95 Days

Fruit 6 x 6 inches, slightly oval, deeply ribbed, finely netted and light green in color. Flesh is light green, thick, firm, sweet and well flavored; fairly fine grained. Large seed cavity. Good garden type.

### OSAGE OR MILLER'S CREAM 94 Days

Is of medium size, oval in form and dark green in color, somewhat netted and slightly ribbed. The flesh is extremely and uniformly thick, of firm texture and rich salmon in color, highly flavored and delicious to the rind. Seed cavity very small. It is a remarkable keeper and a good shipping melon.

### PRIDE OF WISCONSIN 90 Days

A cross between Honey Rock and Hearts of Gold. Fruits oval, 3¾ pounds; rind pearly gray, faintly ribbed, with sparse, coarse netting. Orange flesh, solid and thick, with small seed cavity, very sweet and fine flavor.

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## CANTALOUPE AND MUSKMELON — Continued

### ROCKY FORD, IMPROVED

95 Days

Fruit round, averaging 5 inches, little to no rib, heavily netted, medium light green shading to a dark yellow. Flesh very thick, salmon tinted, solid, fine grained and of exceptionally fine flavor. Very small seed cavity.

### ROCKY FORD, GREEN FLESHED

95 Days

Almost round in shape, covered with netting and averaging about 5 inches in length; flesh green, very sweet and highly flavored.

### SCHOONS HARD SHELL

92 Days

Fruits are thick oval with heavy blossom scar which resists cracking, prominent ribbing with abundant coarse netting; skin gray-green becoming yellow at maturity, very hard and tough; flesh very thick, deep salmon-orange, solid, well flavored, excellent quality.

### TIP TOP

89 Days

This very productive melon is of medium to large size, nearly round, slightly ribbed and fairly well covered with shallow netting. The flesh is deep yellow in color, sweet, juicy and of finest flavor, firm but not hard; edible to the very coating.

## CARROT — FOR THE TABLE

**CULTURE.** The Carrot, whether used raw, fried, boiled or stewed, used alone or combined with other vegetables or meat is not surpassed in nutritious healthfulness by any vegetable. Plant Carrot seed from the time the soil can be worked in the spring till July, in 1- or 2-ft. rows for hand cultivation or in 30-inch rows where a machine tool is used. Use 1 ounce of seed to 100 feet or row, 3 to 4 pounds to the acre, covering one-half inch deep and later thin to a 4-inch stand. To cultivate the rows at an early date, sow Cabbage or Kohl-Rabi seed, which germinates quickly, with carrot seed, which germinates slowly. Do not overlook the value of this crop as a stock food. Number of days from planting to roots of bunching size.



Carrot Seed Field



## CARROT — FOR THE TABLE — Continued

### CALIFORNIA PEERLESS

70 Days

This carrot is of outstanding quality, very smooth and of medium size with very small core and does not make very much top. The color is a bright red. It will stay in bunching condition for a long while and is a fine carrot to pack and sell in boxes. The crown is oval in shape and the tops do not break off as in other carrots.

### CHANTENAY, RED CORED

70 Days

An outstanding favorite with many people who grow carrots in their gardens. The rich deep reddish-orange color extends clear to the center. The root tapers to a blunt end.

### LONG OR GREATER CHANTENAY

70 Days

This is a strain of Early Chantenay which resembles the original type in all respects except that it averages 1½ to 2 inches longer.

### DANVERS

73 Days

Grown largely on account of its great productiveness and adaptability to all classes of soil. Tops of medium size, coarsely divided. The smooth and handsome roots are deep orange, of medium length, tapering uniformly to a blunt point; flesh sweet, crisp, tender and of a deep orange color.

### GOLD PAK

77 Days

A 1956 All American selection. A crisp, flavorful Carrot which is smooth, slender and grows 8 to 10 inches in light soil. Tops are short and strong. Both interior and exterior color very good.

### IMPERATOR

77 Days

Tops medium but strong enough for good bunching. Roots 7 to 8 inches long, have sloping shoulders, are smooth, deep rich orange; tapered to a semi-blunt end. Flesh rich orange color, extending to center of root with indistinct core; fine grained, tender and of fine quality. An excellent variety for market garden and shipping.

### IMPROVED LONG ORANGE

88 Days

A heavy cropping sort for garden use, and for stock. Roots tapered to a point; red-orange. Flesh similar in color to exterior, with core of lighter shade.

### NANTES HALF LONG OR CORELESS

70 Days

Tops of medium size, roots cylindrical, smooth, bright orange; flesh orange, becoming yellow in center but with no distinct core. Excellent for the market or home garden.

### OX HEART OR GUERANDE

72 Days

Tops small for the size of the roots, which are comparatively short, but often reach a diameter of 5 inches, terminating abruptly in a small tap root. Flesh bright orange, fine grained and sweet. This variety is especially desirable for soil so hard and stiff that longer rooted sorts would not thrive in it. When young, excellent for table use, and when mature equally good for stock.

### TOUCHON

70 Days

Similar to Nantes but a little larger. Small topped, smooth, cylindrical, bright orange, core very small and inconspicuous. Well adapted to canning and freezing.

### POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.



## CARDOON

### LARGE SOLID

In appearance and growth is like the Globe Artichoke, to which it is closely related, and — like the Artichoke — it is a perennial. Grown for its leaf stalks, which — when blanched — are used in salads or cooked and served like asparagus.

## CAULIFLOWER

**CULTURE.** For very early Cauliflower sow in hotbed in January or February; transplant to flats or cold frames and set out as soon as the ground is warm in the spring, setting 2 to 2½ feet apart each way. One ounce grows 2,500 plants and four to six ounces plant an acre. Cauliflower cannot be expected to mature satisfactorily in hot, dry weather so must have plenty of water especially when the plants are heading. When the head appears, tie the outer leaves over the head or pin these leaves with wood pins or beef skewers so the leaves will shade and blanch the head and then cut the head before it starts to branch. Remember that all the enemies of cabbage emphatically attack Cauliflower and are to be combated in a like manner. For early fall and late Cauliflower, plant in open ground in April, transplanting in June, giving same cultivation you would Cabbage. The number of days given is the time required from setting plants to mature heads.

### EARLY SNOWBALL

55 Days

Plants dwarf, with short pale green leaves. Heads medium, firm, compact, solid, pure white, and of finest quality; a dependable header. Well adapted to shipping.

### SUPER-SNOWBALL

56 Days

A highly desirable main crop variety, also used for early planting. Starts heading early and uniformly. Heads medium large, compact, very white.

### SNOWDRIFT (White Mountain)

57 Days

Plant of medium height with upstanding, medium green outer leaves. Head slightly larger than Snowball, firm, solid, very white, well protected inner folding leaves. One of the best varieties for shipping long distances.

## CELERY

**CUTURE.** Press celery seed into ground; do not try to cover it and when seed is kept wet and not above 60 degrees F. germination occurs in 10 to 20 days. Celery needs 4 to 5 months from seed to use so very early Celery should be started in hotbeds after January and when two inches high, transplanted or thinned to a space of two inches. Later trim the tops to produce stocky plants and when five inches high set where plants are to mature, first trimming off one-third of the roots and leaves. Celery seed may be planted out-of-doors in April and treated as outlined above. Given sufficient water, celery can be grown on any good garden soil and one ounce of seed gives about 6,000 plants. When almost grown, Celery must be blanched by the use of boards, earth, paper or other covering. If boards are used, rows can be set as close as thirty inches; if earth blanched, 48 inches or more is better. Set plants six inches apart in the row and press the soil firmly about the roots. With a few stalks in a garden, a tile set over the plant or a wrapping of paper answers the purpose. If earth is used in blanching it should be drawn about the plant to one-third its height and repeated twice a few days apart till leaves only are exposed. Do not cultivate, hill or disturb celery when damp or rust may occur. In hilling with earth, place a peg at end of row with string to it and pass string about each plant so as to prevent earth from falling into the heart. To store, celery should be only partly blanched. Celery matures best in cool, moist weather, so the grower farther south may delay this planting calendar to fit his own market and convenience. Number of days is from sowing seed to edible stage.



## CELERY — Continued

- FORDHOOK OR EMPEROR** 125 Days  
 Leaf (outer) dark green, (inner) yellowish green, medium large and quite thick, average 18 inches tall. Stalk large and thick, heavy, tender, crisp, very little fiber; blanches to a pale gold heart. Good garden and local market type. A fair winter keeper.
- GIANT PASCAL** 135 Days  
 This is a green leaved variety and an excellent sort for fall and winter use. It blanches to a beautiful yellowish-white color, is very solid and crisp and of a fine, nutty flavor.
- GOLDEN SELF-BLANCHING, ORIGINAL STRAIN, SELECTED** 120 Days  
 The original strain has a greenish tinted outer leaf and a yellow inner leaf, leaves are medium heavy with a fairly strong rib; grows 15 to 16 inches tall and is fairly compact in growth. Stalk is medium large, solid, very crisp, without fiber, and blanches to a medium deep yellow. It is most excellent for early market and shipping. Has a very fine flavor.
- UTAH PASCAL (Golden Crisp)** 126 Days  
 A green variety recommended for fall use, maturing earlier than Pascal. Stems thick, solid, broad, rounded and of fine quality.
- WHITE PLUME SELF BLANCHING** 110 Days  
 This is the earliest and most easily blanched. The plants grow rapidly and blanch easily during the summer months. Later in the fall the central stalks and leaves are of pure snowy whiteness even without earthing up.
- WONDERFUL OR GOLDEN PLUME** 115 Days  
 A selection made from the old type of Golden Self Blanching for a much larger heart or stalk; is a few days earlier. Has all the good points of its parent plus increased size and earliness.

## CELERIAC

- LARGE SMOOTH PRAGUE** 120 Days  
 Grows 12 to 14 inches tall. Roots are tapered in shape, 2 by 5 inches; usually show considerable side roots. Flesh is pure white. Used as celery flavoring for soups. This is the most commonly used strain.

## CHICORY

- LARGE ROOTED OR COFFEE** 120 Days  
 The dried and prepared roots are used quite extensively as a substitute or adulterant for coffee, and the leaves used as a salad.
- RADICHETTA (ASPARAGUS CHICORY)** 60 Days  
 Dandelion looking foliage with young seed stalk similar to spear of Asparagus; both young leaves and seed stalk are used, being tender and of dandelion flavor.
- WITLOOF OR FRENCH ENDIVE** 140 Days  
 Grown for its use as a salad, the blanched head resembling Cos Lettuce in appearance. The seed planted in the late spring gives parsnip-like roots by late autumn. The roots are then placed in earth where there is some heat, as in the greenhouse, boiler room, or a warm cellar. The root then throws out the blanched salad head.

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## COLLARDS

### TRUE GEORGIA OR SOUTHERN

80 Days

Plant 2 to 3 feet high, forming a cluster of tender, undulated leaves at the top of its rather long stem; used as "greens" in the south and west.

### BUNCOMBE OR CABBAGE

70 Days

A cross between Georgia Collards and Charleston Wakefield Cabbage, bred for the easy growth and hardness of the Collard and the flavor and heading qualities of the Cabbage. It does not winter-kill with ice and snow and stands hot weather as well. Heads are rounded, not as firm as Cabbage but of delicious flavor.

## SWEET CORN

**CULTURE.** Sweet Corn produces best on fertile soil and the land should receive a good complete fertilizer treatment before planting. Do not plant corn in cold ground unless a good seed treatment is used. About the middle of May, plant corn in hills 3 to 3½ feet each way, dropping 4 to 5 seeds to a hill, later thinning to 3 stalks; or plant in 3 or 3½-foot rows, dropping 3 seeds to the foot, later thinning to stand 1 foot apart in the rows. Seed should be covered ½ inch on heavy soil to 1 inch on light, sandy soil. One pound will plant 200 hills or 400 feet of row and 7 to 10 pounds plant an acre. Plant every two weeks up to July 15th for a continuous supply. Early July plantings are delicious in September. Number of days is from germination to roasting ear stage.

### HYBRID VARIETIES

New and superior Hybrid varieties are rapidly replacing the open-pollinated types. The performance of Hybrids in comparison to open-pollinated varieties is outstanding. The vigor, uniformity in maturity, disease resistance, quality, resistance to lodging and productivity is outstanding and justifies the popularity and widespread use of Hybrids.

#### ALPHABEST (f)

*Originated by Michael-Leonard Company*

65 Days

Ear—9 inches long, 8 to 10 rows, medium yellow, excellent quality, sweet and tender with well filled tips, long protecting husk. Plant—5½ feet tall, vigorous, makes good early growth, dark green, drouth resistant. Use—Canning, whole ear pack; market garden and home garden and freezing. A new introduction in the early class. A fine corn for the home gardeners as well as bringing in a good early price for the market gardener.

#### ALPHAGOLD

*Originated by Michael-Leonard Company*

60 Days

One of the best extra early sweet corns for garden use. This uniform, high yielding, 10 to 12 rowed hybrid closely resembles Golden Bantam but is earlier than most strains now in use. The ears are well covered with a protective husk reducing damage from birds and ear worms so often found in the first sweet corn ready for eating. Plants are about 4½ feet tall, frequently bear two well developed 10 to 12 rowed ears. It fills out exceptionally well at tip of the ear and has much less smut than most early varieties.

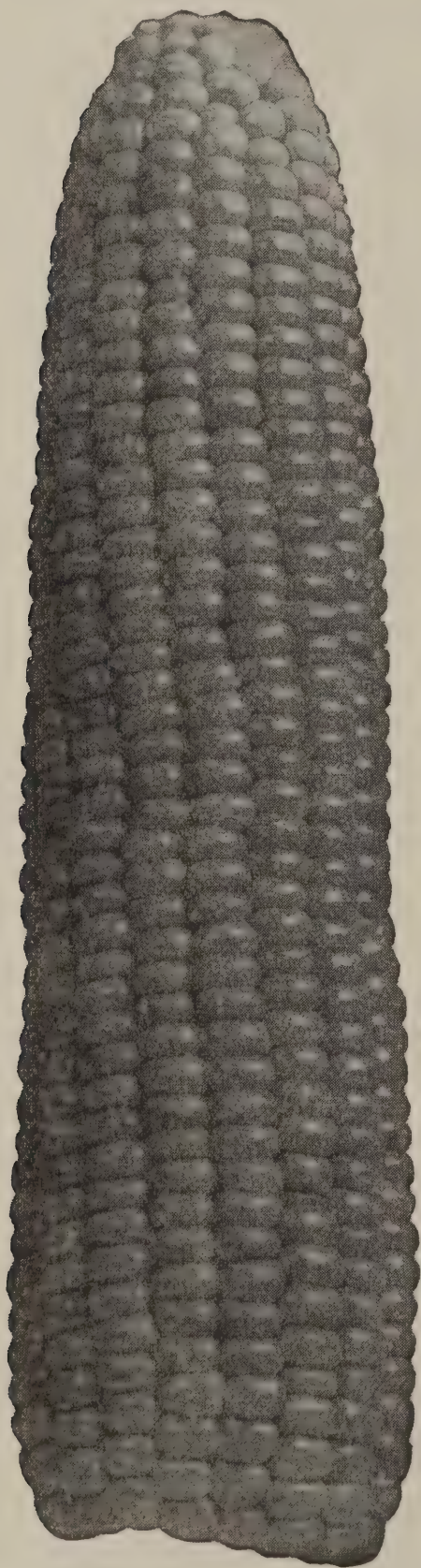
#### ARISTOGOLD BANTAM (f)

*Originated by Michael-Leonard Company*

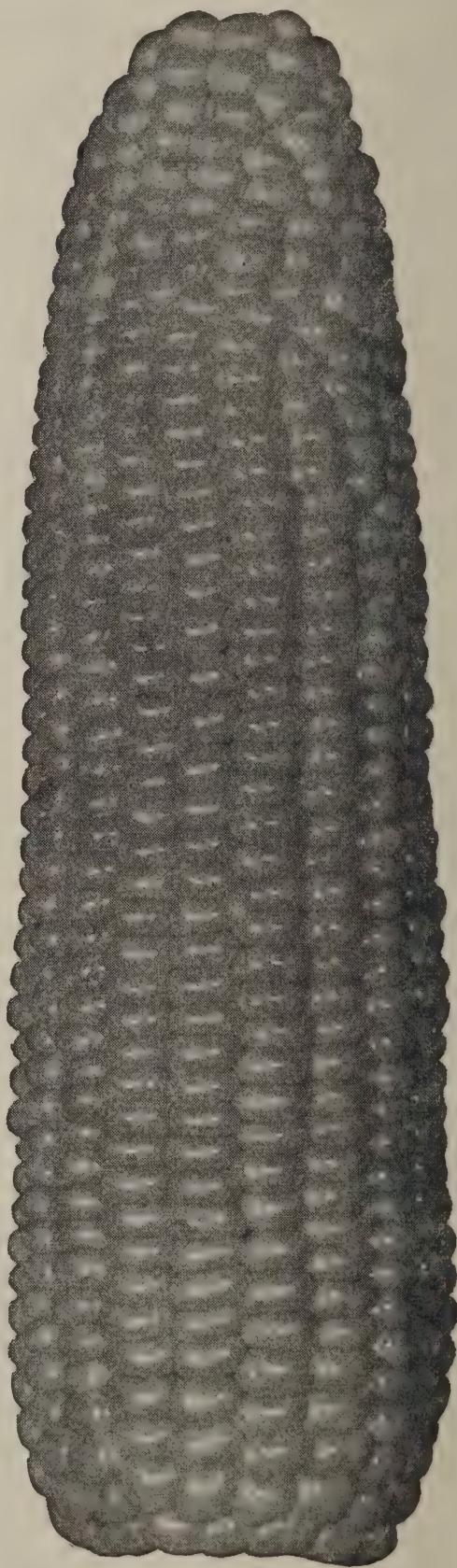
83 Days

Another one of our winners from the All America Seed Trials and one which is built to stand abuse from the weather. This handsome, fast growing, rich yellow corn yields extra long 12 to 14 rowed ears with deeper kernels than any other Bantam type. Stalks are 8 to 9 feet tall with dark green leaves and husks. The ears are uniform and symmetrical, making exceptional yields even under adverse conditions of drouth or heat because of the deep root system. It is a quality corn, more resistant to ear worm and smut damage and will stand earlier planting in cold, wet soil than other types.





**Aristogold Bantam  
Evergreen**



**Golden Grain**



## HYBRID SWEET CORN — Continued

### ARISTOGOLD BANTAM EVERGREEN *Originated by Michael-Leonard Company* 87 Days

This is the biggest yellow sweet corn which can be classed in the high quality group. Ears are 16 to 18 rowed, 9 to 10 inches long with clean stalks 8 to 9 feet tall. It has yielded as much as 10 tons of snapped ears per acre under good conditions and is resistant to ear worm, smut and hot weather the same as Aristogold Bantam. But don't let the size mislead you as this corn is strictly first class in flavor and tenderness, good enough that people from the fancy early yellow north country often take ears back with them to give their friends.

### EVERTENDER (f) *Originated by Michael-Leonard Company* 78 Days

Unsurpassed for delicious eating quality, whether fresh, canned or frozen. Closely resembles Tendermost. It has a 6 foot stalk and an ear that is 8 to 8½ inches long with 14 to 16 rows. It is bright yellow, hulls are thin and very slow to toughen even when over ripe, flavor and sweetness superb.

### GOLDEN BEAUTY 67 Days

The plant is 5½ feet tall. Ear is 7½ to 8 inches long, 10 to 14 rows, bright yellow, good flavor and texture. This variety was an All American variety introduced by the Massachusetts Experimental Station.

### GOLDEN CROSS BANTAM (f) 82 Days

A bright yellow, 12-rowed corn with 8-inch ears borne well up on a sturdy stalk. The quality is fully equal to Golden Bantam in every way, matures six days later and is two to three times as productive. In addition, this corn is very resistant to the bacterial wilt known as Stewart's Disease, which often causes failure with other early yellow sweet corns. Originally introduced by Glenn Smith of Purdue University and is a very popular variety.

### GOLDEN CROSS BANTAM, M-L WHITE SILK (f) 81 Days

Originated by Michael-Leonard Company. Has the same good qualities of regular Golden Cross plus pure white silks. Ear 8 inches long, mostly 14 rows, deeper than average kernel. Plant 6½ to 7 feet tall, vigorous, dark green, wilt resistant, suckers moderately.

### GOLDEN GRAIN *Originated by Michael-Leonard Company* 84 Days

Probably the most spectacular of the yellow sweet corn hybrids. Stalks are 8 feet tall with practically no suckers and bright, dark green leaves. Ears are 8 to 9 inches long with 16 to 18 rows of unusually deep kernels. Ears are borne strongly arched and have excellent husk covering to reduce bird and worm damage. Kernels are narrow and bright gold in color. Another one of our All American champion sweet corns.

### MICHAEL-LEONARD'S HYBRID GOLDEN HUMMER 68 Days

Stalks 5 to 6 feet with showy 12 rowed ears. One of the best early market and garden varieties. The big well filled ears are among the most delicious of the early types. Very hardy and a reliable producer.

### GOLDEN REGENT *Originated by Michael-Leonard Company* 89 Days

This variety is well adapted to the Southern Cornbelt or deep South. It has a 7 to 8 foot stalk, deep rooted and stands the heat and drought. Very high yielding, single eared with practically no suckers. Ears are 9 inches long, 20 to 22 rows with well filled tips. It has narrow deep kernels, long husks over tips. Good flavor and texture.

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## HYBRID SWEET CORN — Continued

### GOLDENYIELD

*Originated by Michael-Leonard Company*

**87 Days**

Plants are 8 feet tall, very drought and heat resistant, shows less earworms than most kind. It has deep roots and seldom lodges. Ears are 9 to 9½ inches long, 14 to 16 rows, long slim, well filled at tip, good husk cover, often two good ears per stalk. It has a sweet rich flavor.

### IOANA D. R.

**83 Days**

Our D. R. strain of Ioana is about a foot taller and has a slightly longer ear and is more worm resistant than regular Ioana. The ears are also higher off the ground and lend themselves very well to spraying. Excellent market variety for Texas and Florida producers.

### IOCHIEF

**86 Days**

Ear—8 to 9 inches long, 14 to 18 rows, good quality, brilliant yellow, deep kernels. Plant—7 to 7½ feet tall, few suckers, dark green, drought resistant, good yields. A fine variety for the home garden. Produces large ears on large stalks. The yields are high and the fancy edible period is 85 to 88 days.

### LONGCHIEF

*Originated by Michael-Leonard Company*

**85 Days**

The flavor and texture are the best of the large eared varieties. Its 8½ to 10 inch long cylindrical ears are well filled at the tip with ideal husk cover—it has mostly 18 rows per ear. The plant is drought resistant with practically no suckers. It produces tremendous yields of large showy ears.

### MARCCROSS

**76 Days**

Stalks short but sturdy, highly resistant to bacterial wilt. Ears long, plump, abruptly tapered at tips; 10 to 14 rowed, with light cream-yellow, medium-broad kernels of good quality; popular early hybrid.

### SPANCROSS

**65 Days**

Plants are 4½ to 5 feet tall. Ear is 7 to 7½ inches long, with 10 to 12 rows per ear. Kernels are broad and not too deep—used as an early corn in the Northern areas.

### TENDERCHIEF (f)

*Originated by Michael-Leonard Company*

**85 Days**

Plant is 8 to 9 feet tall. Has very few suckers, drought resistant with unusually high yields. Smut and wilt resistant. Ear is 8 to 9 inches long with 14 to 18 rows. It has rich yellow kernels that are crisp and tender. This variety is always dependable with top level yields and the processed product resembles garden fresh corn.

### TENDERFREEZER (f)

*Originated by Michael-Leonard Company*

**82 Days**

Ideal for canning or freezing on the ear. Exceptional sweet flavor, narrow kernels, long slender ear mainly 12 row.

### TENDERGOLD

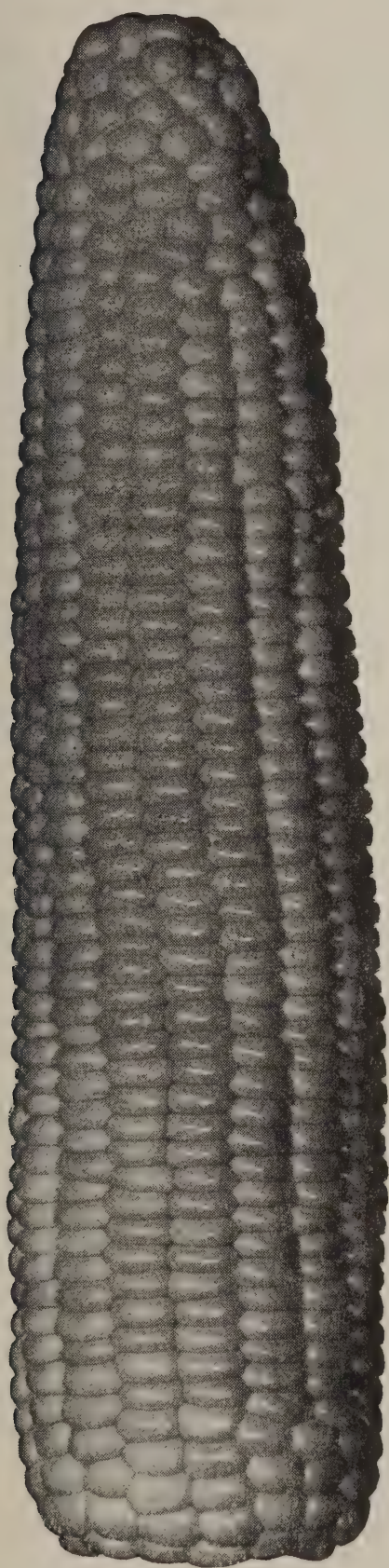
*Originated by Michael-Leonard Company*

**79 Days**

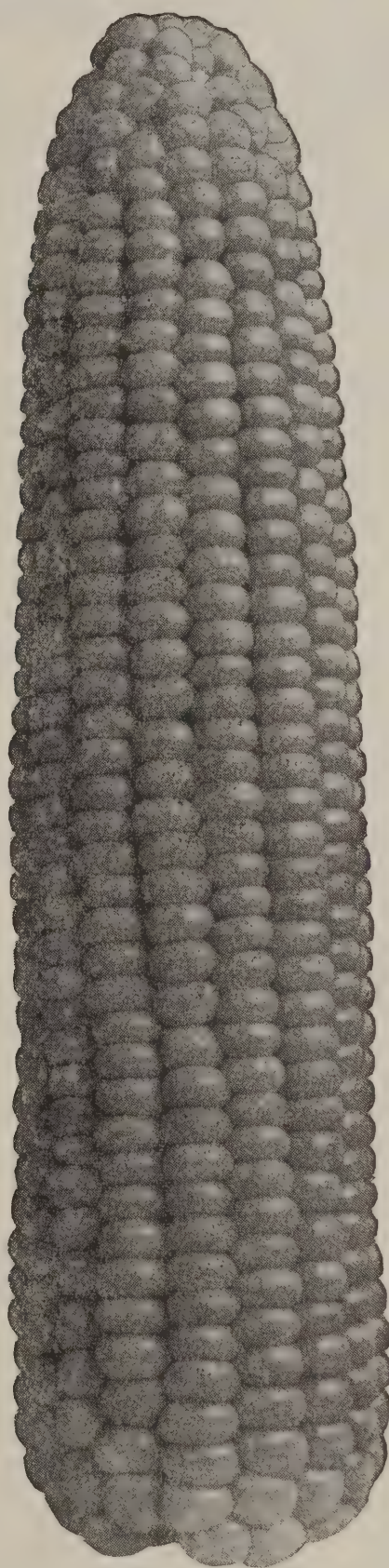
A very fine corn of outstanding quality introduced by us. Four days earlier than Golden Bantam and generally twice as productive, the attractive 8- to 9-inch, 12-rowed ears commanding a premium on the market. For tenderness and succulence we have never seen its equal, and it holds this fine quality two to three days longer than other corns. Produces heavy crops in areas where Golden Bantam succumbs to bacterial wilt (Stewart's Disease).

**FOR BETTER RESULTS INSIST ON POWER-PAK SEEDS.**





**Tendermost**



**Silver Cross  
Bantam**



## HYBRID SWEET CORN — Continued

- TENDERMOST (f)** *Originated by Michael-Leonard Company* **83 Days**  
 We reserved this name for the best quality yellow sweet corn we have ever produced. From the first day the ears are ready to use until the leaves and husks begin to turn brown you will find it the tenderest corn you have ever had in the garden. It is as near hullless as sweet corn can be grown. The clean 9 inch golden 14 to 16 rowed ears are deliciously sweet and develop a brilliant gold color when cooked. They have plump, well filled tips with deep kernels. Plants and ears are about a foot higher and smut resistance is distinctly better than that of Golden Cross Bantam. Generally considered the best main season corn for canning and freezing.
- TOP FLIGHT BANTAM** *Originated by Michael-Leonard Company* **82 Days**  
 One of our outstanding winners from the All America Seed Trials this handsome 14-16 rowed yellow sweet corn generally produces two well developed ears per stalk. Ears are about 9 inches long, well filled at the tips, crisp, tender, and succulent. Because of its strong tendency for good twin ears it often yields more dozens of marketable ears per acre than any other kind.
- TOPYIELD** *Originated by Michael-Leonard Company* **86 Days**  
 Excellent yields with 7 foot plants, very drought and smut resistant with strong, deep roots. The ear is 9 inches long and has 16 rows, often two per stalk. It has good husk cover, well filled tips and has good flavor.
- TRISTATE** *Originated by Michael-Leonard Company* **86 Days**  
 Here is the hybrid which produces a higher percentage of perfect ears than any other kind we have had. Uniformly well filled at the tips, the 16 rowed ears have remarkable resistance to ear worms and smut. Plants are very dark green, 8½ to 9 feet tall and are clean and free from suckers. It is one of the best to use in dry seasons.
- SILVER CROSS BANTAM (f)** *Originated by Michael-Leonard Company* **82 Days**  
 If you like white corn don't miss this one. Silver Cross Bantam has the same high quality that Golden Cross possesses. In fact they are alike except Silver Cross is white. The plant is 6½ to 7½ feet tall, vigorous, widely adapted and is a good yielder. The ear is 8 to 9 inches, 12 to 14 rows, snow white, good kernel depth and has a flavor like Golden Cross.
- SILVER CROSS COUNTRY GENTLEMAN** *Orig. by Michael-Leonard Co.* **91 Days**  
 This is a universally dependable producer in the Country Gent class with typical zig zag rows and deep, tender narrow, snowy white kernels. Ears 8 to 9 inches long with excellent flavor and good texture.
- SILVER CROSS EVERGREEN** *Originated by Michael-Leonard Company* **88 Days**  
 This hybrid combines the parentage and quality of the white bantams with the size and yield of the Evergreens. Stalk and leaf growth are like the Early Evergreens but the ears have higher sugar content and excellent tenderness. Ears are about 8 inches long, of good diameter and mostly 16 rowed.
- HYBRID STOWELL'S EVERGREEN** *Originated by Michael-Leonard Company* **95 Days**  
 A big eared, thrifty, high yielding hybrid. Stalks 8 to 9 feet and ears 16 to 18 rowed. Gives top yields of the best quality late white corn. More uniform ear style than Stowell's Evergreen.

## SWEET CORN — OPEN POLLINATED

The open-pollinated varieties are rapidly being replaced by new and superior Hybrid strains. After each variety you will find the name of a hybrid variety to replace it.



## SWEET CORN — Open Pollinated — Continued

- BANTAM EVERGREEN** 85 Days  
A cross between Golden Bantam and Stowell's Evergreen. Ears 8 inches long, 12- to 14-rowed; grain rather broad and deep of a rich golden yellow color. Replace with Aristogold Bantam Evergreen or Golden Grain.
- COUNTRY GENTLEMAN** 90 Days  
Seed small, round, slim, pointed, shoe peg type; stalk 7 feet, ears 7 to 8 inches, tapered, small, white kernels (not in rows) very closely packed, very deep, slim, round top, pure white, very sweet and well flavored. Replace with Silver Cross Bantam or Silver Cross Country Gentleman.
- EARLY EVERGREEN** 83 Days  
The ears of this corn grow 8 inches long, are mostly 14 to 18-rowed. It ripens 10 days in advance of Stowell's Evergreen and is equally as good for all purposes. Replace with Silver Cross Evergreen.
- STOWELL'S EVERGREEN** 94 Days  
Standard main crop variety. It is popular for marketing and for the home garden. Stalks 7 to 8 feet; ears 14- to 18-rowed, 7 to 9 inches long. Replace with Hybrid Stowell's.
- GOLDEN BANTAM** 78 Days  
Stalks 4 to 5 feet high; ears 6 to 7 inches long with 8 rows; kernels broad, sweet, very tender. Replace with Evertender.
- IMPROVED GOLDEN BANTAM** 82 Days  
A yellow variety good for home garden. Ears large, 6 to 6½ inches long with 10 to 14 rows; kernels medium, tender and of good flavor. Replace with Tendermost.
- GOLDEN EARLY MARKET** 72 Days  
Ears 8 to 12 rowed, stalk 4½ feet. Kernels tender and of good flavor. Replace with Alphabest.
- MICHAEL-LEONARD'S GOLDEN HUMMER** 60 Days  
One of the earliest of the Yellow Sweet Corns for market gardeners as well as home gardeners. Ears 6½ to 7 inches, 12-rowed; kernel golden yellow, medium deep, broad and of excellent flavor. Replace with Alphagold.
- GOLDEN SUNSHINE** 70 Days  
An early variety of Golden Bantam type. Stalks 4½ to 5 feet high; ears 10- to 12-rowed, 6½ to 7 inches long; kernels large, broad, golden yellow and of good flavor. Replace with Hybrid Golden Hummer.
- LEONARD'S EARLY** 60 Days  
The stalks are short and stocky, usually producing two large, 12-rowed ears on each stalk. The corn is a waxy white and of sweet flavor. Replace with Silver Cross Bantam.

## CORN — ROASTING EAR

- ADAMS EARLY** 82 Days  
Stalk 6 to 7 feet tall, with a good leaf growth; ears 7 to 8 inches long, slender, white, 12 to 14 rows of white, smooth, medium deep, medium broad kernels. Not a true sweet corn but used in the south for roasting ears. Replace with Silver Cross Bantam.

### HERE'S WHAT POWER-PAK DOES:

Preserves Seed Vitality  
Protects Against Disease

Preserves Seed Vitality  
Protects Against Disease



## CORN — ROASTING EAR — Continued

### HYBRID TRUCKER'S FAVORITE

78 Days

This snowy white hybrid bears ears with mostly 16 rows of kernels, ears about 10 inches long. Kernel depth is good and the ear shape is cylindrical with a medium small cob. Flavor on this variety is rich and creamy. Stalks are about 7 feet tall and very resistant to heat and drouth. It seldom shows smut development and is a very dependable producer on all soil types.

### TRUCKER'S FAVORITE

78 Days

A true favorite with the shippers in the south. The ears are 8 to 10 inches long, 14- to 16-rowed, usually two to the stalk; kernels are white. **Replace with Silver Cross Bantam.**

## POP CORN

### JAPANESE HULLESS (White or Australian Hulless)

90 Days

Ears 2½ to 4½ inches long, well filled with deep narrow kernels, which pop pure white, tender and very sweet. Stalk 5 feet tall.

### SOUTH AMERICAN YELLOW

110 Days

Ears 7 to 7½ inches 12-16 rowed with large yellow kernels that pop to enormous size without hard centers. Stalk dark green about 7½ feet tall. Very popular variety.

### MINHYBRID 250

85 Days

This hybrid variety is an improvement over Japanese Hulless for yield and popping. Ears 3 to 4 inches long, plump and blunt, kernels are deep pointed with thin skins. Stalks 5 to 6 feet tall.

### SOUTH AMERICAN HYBRID

105 Days

Orange yellow kernels somewhat rounded with very high popping expansion. Ears 6 to 8 inches long, 14 to 16 rowed. Vigorous grower, stalk 6 to 7 feet high.

## CRESS

### CURLED OR PEPPER GRASS

A small plant with frilled or curled leaves which are well liked when young for garnishing and for giving a warm pungent taste to lettuce. It grows best in cool weather and moist soil.

### TRUE WATER

A distinct variety of cress with small, oval leaves. It thrives best when its roots and stems are submerged in water, although a fair growth may be obtained in soil which is kept wet. The seed is usually sown and lightly covered in gravelly, mucky lands along the borders of small, rapid streams.

## POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.



## CUCUMBER — PICKLING VARIETIES

**CULTURE.** For very early cucumbers sow April 10th in hotbed upon pieces of inverted sod so that they can be transplanted without disturbing roots. When the ground is warm transplant into well prepared hills and protect with glass until hardened. For outdoor planting wait until the ground is warm, then sow 10 to 12 seeds in hills 4 to 6 feet apart each way, thinning 3 or 4 plants to a hill after danger from insects is over. Cultivate as long as possible; gather when large enough for use and to keep plants bearing do not allow them to ripen. Number of days is from planting to first picking.

### CHICAGO PICKLE, B. S.

**57 Days**

A variety esteemed above all others by Chicago market gardeners and extensively grown for the large pickling establishments. Fruit medium length, square ended, with large and prominent spines. Color a deep green. It combines all the good qualities of an early Cucumber.

### EARLY CLUSTER, B. S.

**55 Days**

Vines vigorous, producing the bulk of the crop near the root and in clusters.

### BOSTON PICKLING OR GREEN PROLIFIC, B. S.

**58 Days**

Vine makes a heavy, rather short runner growth; fruit short, thick, very slightly tapered, blunt ends, very uniform in shape; fully developed fruit 2½ x 6 inches. Medium dark, uniform color. Good pickler.

### MR17

**56 Days**

Vine, vigorous, dark green, large leaves. Fruit 6½ to 7½ inches long by 2½ to 3 inches in diameter, tapering, well warted. Small seed cavity, black spine. A mosaic resistant pickling cucumber developed at Ohio State University. It is slimmer and darker green than National, very productive.

### NATIONAL PICKLE, B. S.

**54 Days**

Early, high yielding variety especially bred for pickling in the small sizes. Fruit straight, symmetrical, blunt-ended, but not chunky.

### S. R. No. 6

**55 Days**

Vine vigorous, dark green, productive. Fruit 5½ to 7 inches by 2½ to 3 inches thick, dark green, cylindrical, black spine. Developed by Dr. Walker, University of Wisconsin, as spot-rot resistant National type pickle.

### WEST INDIAN GHERKIN

**60 Days**

A very small, oval, prickley sort, distinct from all others.

## CUCUMBER — SLICING VARIETIES

### A & C, W. S.

**68 Days**

Uniform, nearly cylindrical, very dark green, well rounded at ends. Highly desirable for shipping and for market gardens.

### IMPROVED LONG GREEN, B. S.

**68 Days**

Makes a heavy, long runner growth. Fruit 2½ x 10 to 12 inches, somewhat tapered, inclined to warts, uniform in shape and size. Color medium dark with light stripe toward blossom end. One of the best of the all-purpose types. One of the most dependable croppers under all conditions of weather and soil types.

## CUCUMBER — SLICING VARIETIES — Continued

### EARLIEST OF ALL, W. S.

60 Days

The earliest of the white spine cucumbers, medium in length, smooth and very symmetrical, while the dark green color is excellent. Its chief use is for long distance shipping; is also adapted for pickling and is grown commercially, to a large extent, in some sections. Size  $7\frac{1}{2}$  by  $2\frac{1}{2}$  inches.

### JAPANESE CLIMBING, B. S.

60 Days

Distinct climbing sort, used to cover trellises and fences. Fruit weighs 2 pounds; deep green, quite uniform and attractive. The color of ripe fruit is deep russet, traced with netting.

### LEONARD'S SPECIAL DARK GREEN, W. S.

72 Days

Undoubtedly the finest of the long, large varieties. Fruit averages 14 to 15 inches in length, of very dark green color.

### LONGFELLOW, W. S.

72 Days

Particularly valuable for home gardens as well as for shipping. Fruit a handsome dark green, retaining the color remarkably long after picking; straight and well filled at ends. Very few seeds.

### MARKETER, W. S.

65 Days

Vine vigorous and productive. Fruits 8 inches long x  $2\frac{1}{4}$ . Slightly tapered, dark green in color. Popular for early market.

### STAYS GREEN OR BLACK DIAMOND, W. S.

60 Days

$6\frac{1}{2}$  x  $2\frac{1}{4}$  inches. A good dark green color. Medium in size and a good shipper.

### STAYS GREEN, LONG STRAIN, W. S.

63 Days

A long strain of Stays Green for fall and early spring planting in the South. Fruits 8 inches long x 2 inches, medium dark green, blunt ends and uniform.

### STRAIGHT 8, W. S.

66 Days

Fruit symmetrical, cylindrical, about 8 x  $1\frac{1}{2}$  inches, and well rounded at the ends. Color deep green. Ideal for shipping and home use.

### EARLY IMPROVED WHITE SPINE

62 Days

One of the best sorts for table use. Vines are vigorous, fruiting early and abundantly; fruit uniformly straight and handsome, dark green with a few white spines; flesh tender and of excellent flavor.

### WHITE WONDER OR ALBINO, W. S.

62 Days

Heavy, medium long runner type. Fruit 3 x 7 inches, with straight, blunt ends. Color is creamy white. A useful novelty (as it is fairly well flavored) for slicing and for salads.

### WOODRUFF'S HYBRID, W. S. — CLARK SPECIAL

64 Days

Valuable for market garden and shipping; a main crop sort, prolific and attractive. Fruit 8 to 10 inches long, weighing  $2\frac{1}{4}$  pounds; dark green, fairly uniform with rounded ends. Not a true hybrid.

## CUCUMBER — HYBRID

### BURPEE'S

68 Days

A true first generation Hybrid of the white spine type, fruits averaging 8 inches in length and  $2\frac{1}{2}$  inches in width. A heavy cropping variety with high resistance to downy mildew and mosaic. Prolific all season long.



## CUCUMBER — HYBRID — Continued

### EARLY SURECROP

**60 Days**

An outstanding white spine hybrid slicing variety. Has a vigorous vine which is resistant to mosaic and downy mildew. Slender fruits with blunt ends, 8 to 9 inches long by 2½ inches in diameter with a small seed cavity, dark green skin.

## DANDELION

### IMPROVED LARGE LEAVED

Thick leaves and deep green color make this far superior to the uncultivated plant. It is compact with an upright, regular tuft at the center.

## DILL

### MAMMOTH

Plant 2 to 2½ feet high, with leaves cut into thread-like segments. Seeds very flat, having strong, bitter flavor. Used for flavoring pickles.

## EGG PLANT

**CULTURE.** Treat the Eggplant like a tender tomato that requires even a longer period to mature. After cabbage plants are out of the hotbed or greenhouse, which is April, sow eggplant, keeping even the night temperature above 70 degrees. One ounce of seed gives 2,000 plants, and 4 ounces plant an acre. Transplant later to pots or to a 3- or 4-inch stand, and when corn is shoe high, put eggplant outside on rich, well drained land. Set the plants 2 feet apart in 4-ft. rows, shading or watering the plants if it is sunny or dry. Number of days given is the time required from setting plants to marketable fruit.

### BLACK BEAUTY

**90 Days**

The fruit is a rich, dark purple, large and symmetrical, maturing a little earlier than Improved New York Purple but usually not quite so large. A very desirable sort for the market as the fruit holds its color a long time.

### FLORIDA HIGH BUSH

**94 Days**

Plant, upstanding in growth, bears the fruit off the ground. Fruit, elongated and cylindrical, is purple in color. Highly resistant to blight and drought.

### NEW YORK IMPROVED PURPLE SPINELESS

**93 Days**

Plant makes a 2-foot growth, rather inclined to spread. Fruit oval, 6 x 8 inches, and tapered some towards top. Good color though not so dark as Black Beauty. It is a very heavy producer of large fruits.

## POWER-PAK

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## ENDIVE

**CULTURE.** Endive, or winter lettuce, used as a salad, as greens or garnishing, is usually planted one-fourth inch deep in a seed bed in midsummer, and when convenient after a month transplanted to stand 1 foot apart in 18-inch rows. When almost grown and about 2 weeks before ready to use it is blanched by tying the leaves together with soft cord, or the blanching is done by turning a flower pot or tile over each plant, or by blanching with earth, like celery. The blanching removes the green plant's acrid taste. The plant may be, but seldom is, used as an early spring crop. Three to five pounds of seed plant an acre. Number of days is from planting seed to edible stage.

### BROAD LEAF BATAVIAN — ESCAROLE

90 Days

One of the best varieties for salads. Leaves of upright growth, broad, more or less twisted and waved; bright deep green, with a nearly white mid-rib. Inner leaves form a fair head which blanches a creamy white.

### GREEN CURLED — RUFFEC — MOSS CURLED

95 Days

Plant 16 to 18 inches in diameter, tufty and full in center; mid-rib an inch broad, white, thick, tender and fleshy; blanches readily. Good fall variety.

### WHITE CURLED

100 Days

The divided leaves are of a very light yellowish-green color which blanches almost white.

### FULL HEART BATAVIAN

88 Days

An improved strain of Broad Leaved Batavian, with larger leaf and broader, thicker head at eating stage; earlier in maturity. The plant is medium large with compact, well-blanching heart of infolded broad leaves, thick and buttery in texture. Excellent for market gardeners and shippers.

**FRENCH ENDIVE — See Witloof Chicory.**

## HERBS

In borders and irregular parts of the garden it will prove profitable to grow a few herbs. Their use gives new and unusual flavors, pleasing aromas and perfumes and some medicines that are as serviceable as can be purchased. Exact cultural directions suited to them all is impossible. Give them generally the care given vegetables or flowers. Where the foliage is to be used, cut the young stems on a dry day, wilt in the sun, dry in the shade and either hang up in bunches or store in air-tight glass jars.

### ANISE

A hardy annual used for medicinal purposes and for seasoning and flavoring.

### BASIL, SWEET

An annual used for seasoning sauces, soups and meats.

### BORAGE

A hardy annual grown for bee pasture; also used for flavoring.

### CARAWAY

In its second year this biennial produces seed for flavoring pastry, etc.

### FENNEL, FLORENCE

An annual grown for the blanched base of its stem, which when cooked has a sweet taste, a delicate odor and somewhat resembles celery.

**POWER-PAK MAKES GOOD SEED BETTER!**



## HERBS — Continued

### SWEET MARJORAM

Treated as an annual and the younger foliage used for seasoning.

### SAGE

The well known, hardy perennial used for seasoning.

### SUMMER SAVORY

The foliage and flowers of this annual used for flavoring and seasoning.

### THYME

The leaves of this perennial are used for seasoning and medicinally.

## KALE OR BORECOLE

**CUTURE.** In Virginia, kale planted in late August has some of its plants thinned out and sent to market within sixty days and the cutting then continues until the field is clean in April. Further north, kale is treated like a cabbage; that is, planted early in spring in hotbeds or out-of-doors and it is used in the fall when light frosts have improved it. Kale is sown in two and three-foot drills and then thinned to six to twenty-four inches, according to varieties. One ounce sows generously one hundred yards and four pounds plant an acre.

### DWARF BLUE SCOTCH

55 Days

Plant has wide-spreading, finely curled blue-green, plume-like leaves and stands about 14 inches in height.

### DWARF CURLED SCOTCH

55 Days

Plant low and compact, but with large, bright, deep green leaves, curled, cut and crimped until the whole plant resembles a bunch of moss. One of the best and most dependable types. When well grown and cooked is one of the most palatable of vegetables. Used as greens.

### SIBERIAN OR SPROUTS

65 Days

In this variety the very large, green leaves are comparatively plain in the center but coarsely cut and frilled on the edge. The plant is low but spreading and very hardy.

### TALL CURLED SCOTCH

60 Days

About 30 inches tall, with an abundance of dark green leaves, which are densely curled and cut, forming a very beautiful plant. It stands the winter in the middle states without any protection.

## KOHL-RABI

**CULTURE.** Plant in 18 to 24-inch rows as early as the ground can be worked in the spring, thinning out to stand 2 to 2½ inches apart in the row. Bulbs should be used when they are 2 to 2½ inches in diameter and cooked same as turnips. Sometimes planted in hotbeds and transplanted for very early maturing Kohl-Rabi. One-third ounce plants 100 feet and 4 pounds an acre. Number of days given is from planting to edible bulbs.

### EARLY PURPLE VIENNA FORCING

60 Days

Bluish purple, similar to Early White Vienna Forcing except in color.

### EARLY WHITE VIENNA FORCING

55 Days

An extra early variety making bulbs 2 to 2½ inches in 55 to 60 days after seed is sown outdoors. Has very few short leaves. Bulbs are sweet and tender.

## LEEK

**CULTURE.** This mild member of the onion family is used in soups and salads. Sow one ounce to one hundred feet of row and four or five pounds to the acre, one-half inch deep, as early as the soil can be worked in spring. Thin the plants to a stand of four to six inches in twelve to eighteen-inch rows. It is advisable to throw earth to the plant to blanch it, very much as celery is blanched.

### LARGE AMERICAN FLAG

Makes large, dark green leaves and medium large bulbs on a pure white stem 1½ to 2 inches by 7 inches. It is very hardy and productive.

### LARGE MUSSELBURG

The large variety, often 3 inches in diameter, and becoming very white and tender. A hardy and desirable sort.

## LETTUCE

**CULTURE.** As Lettuce will stand considerable freezing, it may be seeded or transplanted out-of-doors as soon as the soil can be worked in the spring. For a succession, replant every 3 weeks till within 60 days of freezing weather. The soil cannot be made too rich and the crop must be grown quickly and unchecked to be of superior quality. Lettuce is frequently started under glass, like Cabbage in hotbeds; in February transplanted to cold frames and hardened to be set out-of-doors in early April. In more southern or milder winter climates, Lettuce may be sown in autumn, protected with sash or coarse litter, and in late winter planted, transplanted or thinned and matured where planted. When the crop is matured under glass it requires much ventilation and little heat and beware of too much water in cloudy weather. In the summer's heat, canvas or a slatted half shade and plenty of water is of value. One ounce of seed gives 2,000 plants and 3 pounds plants an acre. In the seedbed drop 25 seeds to the foot and gently rake it in; failure may result from too deep a covering. Mature Lettuce in 12- to 18-inch rows giving the loose leaf varieties 3 to 8 inches in the row, and Head Lettuce 6 to 12 inches. Number of days given is from sowing seed to marketable crop.

### BIBB, B. S.

58 Days

A small, early variety of butterhead type, with thick, tender leaves, deep green outside, blanched within to creamy yellow.

### BIG BOSTON, W. S.

76 Days

Head of medium size, compact, with creamy yellow heart. Leaves smooth, glossy, wavy at edge and slightly tinged with brown. Quality excellent. A popular variety for outdoor culture.

### BLACK SEEDED SIMPSON

46 Days

Forms large, loose, yellowish-green leaves, crumpled and frilled, exceedingly tender and crisp. Very popular home garden variety as it is very early.

### CALIFORNIA CREAM BUTTER, B. S.

75 Days

Popular with market gardeners and home gardeners. Heads large and globular with golden yellow interior. Leaves large, thick, dark green tinged and spotted with brown.

### CRISP AS ICE, B. S.

76 Days

Head medium sized. Leaves thick and crumpled, deep green with bronze cast. Fine variety for home gardens.

### EARLY CURLED SIMPSON, W. S.

45 Days

Forms a close, compact mass of curly, yellowish-green leaves; early, hardy plant. Leaves are tender, sweet and of excellent quality. An old favorite with home gardeners.



**LETTUCE — Continued****GRAND RAPIDS, B. S.****43 Days**

An excellent forcing variety as well as one of the best for outdoor planting. Plant erect; leaves medium light green, very curled and fringed. Stands heat and dry weather well.

**GREAT LAKES****83 Days**

A heading variety of the Imperial type developed by the U. S. Dept. of Agriculture and Michigan Experiment Station. Leaves large and well-folded; ribs heavy. Shows considerable resistance to tipburn and ability to head under adverse conditions. For local markets.

**ICEBERG, W. S.****80 Days**

Large curly leaves of bright, light green with a very slight reddish tinge at the edges. The unusual solidity of the heads is insured by the large, white main ribs of the leaves, each of which curves strongly to the center, making it impossible for the leaves to open outward and expose the center which is constantly and thoroughly branched.

**IMPERIAL NO. 44, B. S.****82 Days**

One of the best of the New York or Iceberg types for use in the East and South. A good header and resistant to tipburn.

**IMPERIAL NO. 847, B. S.****84 Days**

Heads medium large, hard and of good quality. Stands up well in warm weather. Resistant to Tipburn.

**IMPROVED HANSON OR NONPAREIL, W. S.****78 Days**

Plant very large with thick yellowish-green leaves; heads large, firm and cabbage-like with sweet, tender heart. Good for midsummer planting and popular with home gardeners.

**NEW YORK OR WONDERFUL, W. S. (New York No. 12)****78 Days**

One of the very best of the curled or crisp heading varieties. The head, at first pointed or conical, becomes globular at maturity and is of medium large size, dark green in color and slightly curled on edges. Heads are very hard and well blanched. Quality is excellent, being sweet, yet never buttery in flavor.

**OAK LEAVED****43 Days**

Leaves are smooth but deeply lobed to resemble the leaf of an oak tree. Plant is medium large size, spreading, fairly dark green. Forms an attractive headlike rosette.

**PREMIER GREAT LAKES, W. S.****75 Days**

Developed from a single plant section of Great Lakes at Pennsylvania State College. All-America Bronze Medal for 1947. Head solid, practically round, up to 7 inches in diameter and two pounds in weight. Slow to bolt and very resistant to tipburn.

**PRIZEHEAD, W. S.****47 Days**

The name is misleading as it is a non-heading variety. Very early, quick growing, making a lot of good eating leaves of excellent flavor. Leaves are light green with very ragged brown edges. A most popular variety with home gardeners.

**POWER-PAK**

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## LETTUCE — Continued

### ROMAINE OR PARIS WHITE COS, W. S.

77 Days

The best known and most popular Cos variety in America. It is medium large, medium green, and forms a good, well folded head of fine quality, which blanches readily.

### SALAD BOWL — ALL-AMERICA, 1952

45 Days

A new green leaf lettuce. Somewhat similar to Oak Leaf but stands the sun better and is slow to bolt, which insures a long harvest. One plant will fill a salad bowl.

## MUSTARD

**CULTURE.** Mustard is grown for its seed which is used for flavoring or medicinal purposes or grown for its leaf which is used in salad or cooked like spinach. Sow mustard as soon as the soil can be worked in spring and every three weeks for a succession, or in the South it may be sown in the fall for early spring greens. Cover the seed lightly in twelve to eighteen inch drills. Cut the leaf when not over four inches high. Number of days given is from planting to cutting.

### CHINESE BROAD LEAF (Large Smooth Leaf)

35 Days

Plant medium large and vigorous; leaves broad, large, oblong and slightly crumpled; medium green; scalloped at edges. Seed reddish brown in color.

### FLORIDA BROAD LEAF

40 Days

Leaf very large, broad, long oval with a smooth saw-toothed edge and broad white mid-rib; bright green in color. Makes a strong, quick growth, spreading out somewhat more than other smooth types. Holds well in hot weather. Seed dark brown in color.

### SOUTHERN GIANT CURLED

35 Days

Leaf very wrinkled, blistered and curled at the edges; light yellowish-green in color. Very prolific. Holds fairly well for spring planting but is mainly used in the south as a winter greens crop. Seed dark brown in color.

### MUSTARD-SPINACH OR TENDERGREEN

30 Days

Plants of rapid and vigorous growth with comparatively narrow, spoon-shaped leaves of dark green. It will stand longer than most varieties without sending up seed stalks. Combines the flavor of mustard and spinach. Seed dark brown.

## OKRA

**CULTURE.** The pods of this plant are used in a great number of ways throughout the Southern States, and the plant should be more frequently grown in the North. Plant at corn planting time in rich land, sowing the seed thickly in two to three-foot drills, and thinning to an eight to twelve-inch stand, according to varieties. A generous planting is two ounces to one hundred feet and ten pounds to the acre. Okra seed may be planted six seeds to the hill, two to three feet apart and thinning to two plants to the hill.

### CLEMSON SPINELESS

55 Days

A very uniform spineless strain of the Perkin's long podded type. Pods rich green, straight ridges. Mature pods are about 7 inches.

### HERE'S WHAT POWER-PAK DOES:

Preserves Seed Vitality  
Protects Against Disease

Promotes Stronger Plants  
Produces Better Stands



## OKRA — Continued

### DWARF GREEN

52 Days

An early dwarf growing sort with dark green, fluted, pointed pods 5 to 7 inches long; quite prolific.

### LONG GREEN

55 Days

Like Dwarf Green but somewhat taller; stalks 4 to 5 feet tall. Pods are like the dwarf.

### PERKINS' MAMMOTH LONG POD

57 Days

Stalks 4 to 5 feet tall; treelike growth. Pods 6 to 7 inches, pointed, ribbed and usually slightly curved. Tapered and medium dark green in color. Very productive and medium early. Main canning variety.

### WHITE VELVET

57 Days

Stalk 5 to 5½ feet tall; rather slender, treelike growth. Pods are 6 to 7 inches long, slim, pointed, somewhat ribbed and light cream colored. Productive and early. Fine garden type.

## ONION

**CULTURE.** As soon as the soil can be worked in spring and not after May 1st, sow onion seed in 12 to 15 inch rows, leaving out every 10th row as a weed alley, if preferred. One ounce of seed plants 150 feet and 4 to 5 pounds plants an acre. Seed should be covered firmly one-fourth inch deep. Quantities of manure had best be applied in the year before the planting and much commercial fertilizer, high in potash, harrowed in immediately before seeding. Begin cultivation as soon as the plant can be seen; cultivate frequently and when convenient thin to a stand of two to four inches.

### EBENEZER (Japanese)

110 Days

Used mostly for growing sets. One of the best keeping onions on the market. Does not run to seed readily. Bulbs 2 to 3 inches, deep flat in shape, deep yellow and very firm, with thick skin.



One of Our Onion Seed Crops

## ONION — Continued

### YELLOW SWEET SPANISH — RIVERSIDE

105 Days

A large, well shaped onion, weighing from 1 to 3 pounds, unusually mild but still retaining its genuine onion flavor. Planted at the proper time and thoroughly cured it is a good keeper and will ship as well as any other shipping onion. To produce larger size they should be thinned 6 to 8 inches between plants.

### YELLOW SWEET SPANISH — UTAH

115 Days

Bulbs; selection from Yellow Sweet Spanish, showing better keeping quality; differs from Yellow Sweet Spanish in having amber skin and smaller neck.

### GOLDEN GLOBE — SEMI-BOTTLE ONION

118 Days

Popular for growing globe-shaped sets of excellent keeping quality; very productive. Bulbs strongly oblong-globe, or bottle neck in shape, rich golden yellow; firm and hard.

### BRIGHAM YELLOW GLOBE

110 Days

Bulbs medium sized, globe shaped with rounded base, solid, well covered with tight thick skin, flesh creamy white. Excellent storage variety.

### YELLOW GLOBE DANVERS

116 Days

Bulbs medium large, globe shaped, yellow with white flesh, firm and hard; good keeper.

### YELLOW GLOBE, SOUTHPORT

116 Days

A large, perfectly shaped globe onion and an excellent one for keeping throughout the winter. A very heavy cropper, a good dark yellow color and handsome in appearance.

### LARGE RED WETHERSFIELD

104 Days

Bulbs 2 to 2½ inches thick, flat, deep red; flesh pinkish-white and very firm. Used extensively for growing sets.

### WHITE EBENEZER

100 Days

Bulbs semi-flat, pure white, solid, mild flavored, good keeper. Popular variety for growing onion sets.

### WHITE PORTUGAL OR SILVERSKIN

100 Days

A medium thick, flat shape when mature, averaging 3 inches; white skin and flesh, sometimes green tinted; thin layers of firm, crisp, fine grained flesh, quite mild in flavor. Skin is fairly tight and tough. Stores well for a white onion. Used mainly for growing onion sets and small pickling onions.

### WHITE GLOBE, SOUTHPORT

112 Days

Bulbs round and of good size; solid, pure white skin, thin and brittle. Good for winter storage. Also used by market gardeners for early bunching.

### WHITE SWEET SPANISH

112 Days

Bulbs large, globular shape with small neck; pure white. Flesh clear white, firm and mild. Very attractive and a fair keeper.

### CRYSTAL WHITE WAX

90 Days

This variety is popular in the south where the transplanting method of culture is practiced. A large, beautiful, silvery white skinned variety of handsome, flat shape and of very fine flavor and quality.

**POWER-PAK MAKES GOOD SEED BETTER!**



## ONION — Continued

### MICHAEL-LEONARD'S NEW BUNCHING ONION

An excellent non-bulbing variety producing an abundance of sweet and tender bunching onions.

### WHITE LISBON

A variety grown largely as a bunching onion. When mature the round, white bulbs are about 3 inches in diameter.

### YELLOW BERMUDA, STRAW COLORED

90 Days

A pale or straw colored onion grown extensively in the Bermudas and southern part of the United States for early shipping to northern markets.

## ONION — HYBRID

### ARISTOCRAT

It is typical to its name, attractive and refined. The bulb is high globe in shape, has firm flesh and is well adapted to mechanical harvesting. The bright yellow scales adhere well throughout a long storage period. It will out-yield the Brigham Yellow Globe and is adapted to the same general area.

### EARLY HARVEST

Has been developed to replace the dry sets. Grown from seed, Early Harvest will form marketable bulbs at about the same time as those grown from dry sets. It has a small top and neck and therefore can be cured quickly even if rather immature at harvest. Early Harvest should be planted early in order to make maximum growth in cool weather—it is not a storage onion.

### ELITE

This is well adapted throughout the North. It is a heavy yielding and an excellent storage onion. It is high globe in shape, flesh is firm, scales yellow and adhere well throughout a long storage period.

### ENCORE

A high yielding early yellow globe type. It is a high globe in shape. Flesh is firm at harvesting but softens if stored too long. Scales dark yellow, bulbs very uniform.

### GRANEX

Developed jointly by U.S.D.A. and the Texas Experimental Station. It is an early yellow variety, good yielder, uniform, semi-globe, slightly flat on top. It combines the good features of its parents—Bermuda Excell 986 and Grano 951. It does well wherever Bermuda types are grown. It is a good keeper.

## POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.



Seed Production Field in Idaho

## PARSLEY

**CULTURE.** Parsley used for garnishing and for seasoning can be planted as soon as the soil can be worked in spring. Cover the slow germinating seed one-fourth inch deep in 12- to 18-inch rows. One-fourth ounce sows 100 feet and 3 to 5 pounds plant an acre. To improve the appearance of the crop, trim the plants with a sickle 2 or 3 times during their growing season and at the approach of winter transplant to cold frames or a sunny window. Parsley may be mulched with coarse litter and wintered for spring use till the new crop begins.

### CHAMPION MOSS CURLED (Double Curled)

Leaves are a uniform dark green color, very finely cut and so closely curled as to resemble bunches of moss. One of the most useful and decorative sorts; fine for bunching.

### HAMBURG OR ROOTED

Mostly grown for the thick, fleshy roots. The roots are nearly white in color, growing about 6 inches long and about 2 inches thick around the neck and gradually tapering toward the base. The flesh is white and somewhat dry. Used for flavoring soups, stews, etc.

### PLAIN OR SINGLE

Leaves flat, deeply cut but not curled. Often preferred on account of the very dark green color as well as the hardiness of the plant and its superiority for flavoring.

### PARAMOUNT

A new and improved triple-curved variety with unusually rich dark green foliage tightly curled. Ideally suited for home and market gardens.

### HERE'S WHAT POWER-PAK DOES:

Preserves Seed Vitality  
Protects Against Disease

Produces Better Stands  
Promotes Stronger Plants



## PARSNIP

**CULTURE.** Plant parsnip seed as early as the soil can be worked in spring and do not cover this slow germinating seed deeper than one-fourth inch. Use 18- to 24-inch rows, thinning the plants to a 4-inch stand. One-half ounce of seed sows 100 feet and 3 to 5 pounds plant an acre. This crop requires the entire season to mature, and as frost improves the roots, they may be left in the ground all winter. Both as to quantities and its feeding values, the Parsnip is a valuable stock feed.

### ALL-AMERICA

**95 Days**

Root large and broad-shouldered, of medium length, fine texture, white color, and with small core; very free from side rootlets.

### IMPROVED HOLLOW CROWN (Guernsey)

Roots 12 to 16 inches long, white, smooth, tender, sugary and of most excellent flavor. Very hardy and will keep through winter without protection.

### WHITE QUEEN (Model)

Similar to Improved Hollow Crown. Free from side roots and very white; an excellent market variety.

## PEAS — SMOOTH SEED

**CULTURE.** All varieties of Peas, regardless of height, may be grown successfully without a trellis or support. As Peas vary in height from 1 to 6 feet, it follows that the distances in the row and apart in the row should vary. Dwarf or half dwarf varieties are best planted in double or companion rows 6 inches apart to support and shade each other in their growth; then leave a space of 18 to 30 inches, according to height of the variety and repeat the double row. The tall varieties that may be given support are planted in a single row, the space between the rows somewhat less than the height of the variety. Work a good complete commercial fertilizer into the soil then drop 10 to 20 dwarf peas to the double row or 6 to 10 tall peas to the foot of row, using 2 pounds to 100 feet and 150 to 180 pounds to the acre. Plant all Peas about 3 inches deep in soil that has been deeply plowed, which gives the Peas the cool, damp climate they prefer. Lightly harrow or rake the soil when the Peas should be breaking through and continue to cultivate until the vine stops the work. All Peas stand some frost and may be planted as soon as the soil may be worked in the spring. Peas should be planted frequently for a succession. The early varieties are planted in August for a late autumn crop. For quality's sake pick Peas before they crowd the pod and pick all pods as rapidly as produced to somewhat extend the plants bearing. As all varieties of Peas lose their characteristics when left without that selection given by expert Seedsmen, it is necessary to go to a reliable source for seed peas.

### ALASKA WILT RESISTANT H. F. 30

**52 Days**

Our own introduction. This strain is more productive, has better color and flavor than the Alcross strain. Canning test made by Wisconsin Experiment Station during 1937 showed that this strain outyielded the best Alcross strain by 20 percent, and the canned Peas rated better in color.

### LAXTON'S SUPERB OR EARLY BIRD

**60 Days**

A hardy early variety, growing 18 to 20 inches in height, with dark green, 4-inch semi-broad, pointed pods of fair quality. Desirable as a gardener's first crop pea, standing very early planting. Seed dark green, dimpled.

### MARROWFAT, WHITE

**78 Days**

Vines hardy, strong, vigorous and bearing broad, thick, leathery pods near the top of the vine, which contain peas of a fair quality. Vine 50 to 60 inches in height. Foliage light green in color; pods 3 inches long, blunt and light green in color. Seed large, smooth, white.

## PEAS — SMOOTH SEED — Continued

### THRIFTIGREEN

68 Days

Our own production that has the hardiness of the Alaska, is a good variety where heat and drought resistance is desired. Vines are 26 to 30 inches, medium green, wilt resistant. Pods are  $3\frac{1}{4}$  to  $3\frac{3}{8}$  inches by  $\frac{5}{8}$  inches, containing 7 to 9 peas. Seed medium green, smooth to dimpled, very uniform and very thin hulls.

## FOR SOUTHERN GROWERS

### BLACK EYED COW PEAS

65 Days

Green Peas large and attractive; reach full maturity about 15 days later for dried peas.

### CREOLE

70 Days

A tall hardy variety that is used in the South as a garden variety and also as a cover crop to be plowed down as green manure. The vines are  $4\frac{1}{2}$  to 5 feet tall, vigorous, prolific and hardy. The pods are  $2\frac{1}{2}$  to 3 inches long, single and double. Seed round and usually smooth.

### CROWDER, BROWN

80 Days

A popular, all purpose variety. It is a branching, dark green plant with sturdy stems. Pods are blunt, round, plump with brownish peas crowded tightly together. Seed buff brown with a dark brown eye.

### CROWDER, CREAM (WHITE CROWDER)

Much like the Brown Crowder, plant rugged, with tendrils at top. Pods are like Brown Crowders except peas are light green in the pod. Seed cream with buff eye.

### LADY PEA

Well adapted for table use. Pods round, blunt, medium green, tightly filled with small, light green peas. Seed smooth, small, cream with a buff eye.

## PEAS — WRINKLED SEED

### ALDERMAN OR DARK PODDED TELEPHONE

70 Days

A large podded pea of the Telephone type, very robust and vigorous as to vine, which attains a height of 48 inches; foliage medium green. Pods 5 inches long, broad, pointed, dark green in color. Seed green, wrinkled, large.

### AMERICAN WONDER

57 Days

Vigorous vines with a luxuriant foliage, growing from 12 to 14 inches high. On account of its dwarf habit of growth it is very desirable for private garden use. Pods are light colored, straight, round, about  $2\frac{1}{2}$  inches long and blunt at the end. Seed is wrinkled, green, medium in size and square at the ends.

### EVERBEARING

76 Days

Vigorous and branching in habit and growth; height 3 feet. Pods  $2\frac{3}{4}$  to 3 inches long, broad, light colored and blunt. Seed green, wrinkled, large in size.

### POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.



**PEAS — WRINKLED SEED — Continued**

- FREEZONIAN (f)** 62 Days  
A uniform Thomas Laxton type. Excellent quality fresh, frozen or canned. Vine 28 to 30 inches, dark green, vigorous, prolific, resistant to fusarium wilt. Pods dark green, 3½ inches long containing 6 to 8 medium to dark green large sweet peas.
- McLEAN'S LITTLE GEM (PREMIUM GEM)** 62 Days  
Strong and vigorous in growth, producing vines from 22 to 24 inches in height; dark foliage. Pods are almost straight, 2½ to 2¾ inches long, light in color and blunt at the ends. Seed is green, wrinkled and medium in size.
- HUNDREDFOLD** 61 Days  
Vines 18 inches tall, dark green, with very attractive large pods; excellent for home garden or shipping.
- LAXTON'S PROGRESS NO. 9 (f)** 58 Days  
Dark green peas, sweet and luscious. The dwarf, vigorous vines average 18 inches in height and carry enormous crops of large, deep bluish-green pods. These measure 4 to 4½ inches long and are tightly packed with 8 to 10 luscious peas.
- LAXTONIAN (f)** 58 Days  
Vines vigorous and productive, growing to a height of 18 inches; foliage dark green. Pods about 4 inches in length, dark green, straight and pointed. Seed light green, large wrinkled, flattened and irregular in shape.
- LITTLE MARVEL (f)** 60 Days  
An extra fine dwarf sweet pea. Pods somewhat larger than Nott's Excelsior. A fine variety for either private or market garden. Height, 16 to 18 inches; foliage and pods very dark green. Pods 3 inches long, nearly round and square ended, containing 7 very dark green peas of high quality. Very productive. Seed light green, medium size, squared, wrinkled.
- NOTT'S EXCELSIOR** 50 Days  
Resembling Gems in habit but more dwarf and uniform in growth. Height 14 to 17 inches with rather light foliage. Pods are light in color, round, about 2½ inches long, blunt at the ends. Seed green, wrinkled, medium in size and square at the ends.
- PERFECTION** 69 Days  
An excellent canners' sort. Vine 30 inches tall, medium dark green, fairly heavy growth. Pods 3 to 4 inches, medium green, slightly curved and blunt. Our strain is mostly twin podded and wilt resistant.
- DWARF TELEPHONE OR DAISY** 70 Days  
Vines 20 to 22 inches high with rather coarse foliage, medium light green, bearing pods broad, straight and about 4 inches long, pale green in color and well filled with peas of excellent flavor. Seed pale green, large, wrinkled.
- THOMAS LAXTON, Wilt Resistant (f)** 60 Days  
A very popular variety. Height 2½ to 3 feet; vine and foliage moderately stout, medium green. Pods medium green, 3½ inches long, straight, nearly round and square ended, containing 7 medium dark green peas of superior quality. Seed large, cream colored, wrinkled.

**FOR BETTER RESULTS INSIST ON POWER-PAK SEEDS.**

## PEAS — WRINKLED SEED — Continued

### WANDO

66 Days

This variety will stand hot weather very well. Its vines are from 24 to 28 inches tall, dark green, vigorous and prolific. Pods are dark green, straight, blunt and tightly packed with 6 to 8 peas. Seed medium green and wrinkled.

### WORLD'S RECORD

60 Days

An improved type of Gradus, being slightly earlier, more dwarf, true to type and productive. Height 2 to 2½ feet. Vines moderately stout, medium green. Pods medium green, 4 inches long, very broad, pointed and well filled with 7 to 9 very large, dark green peas of exceptional quality. Seed large, cream and green, wrinkled.

## PEAS — EDIBLE POD

### DWARF GREY SUGAR

66 Days

The old variety of the edible podded sort and used in no other way. Grows about 2½ feet high and is remarkable for its earliness. Pods are broad, flat and crooked, containing 5 to 6 peas. Seed is brown and round.

### MAMMOTH MELTING SUGAR, WHITE SEEDED EDIBLE POD

72 Days

Large edible pods, 4 to 4½ inches long and 1½ inches broad. Vine grows to a height of 48 inches. The seed is large and a creamy white in color.

## PEPPER

**CULTURE.** The pods of the pepper are used in sauces, salads, soups or as a seasoning and the large mild varieties called mangoes are eaten from the hand or variously stuffed and prepared with cabbage, tomatoes or meat. The pods of green peppers are green until in ripening they turn red or yellow, according to the variety. Start pepper in hotbeds, maintaining a temperature of 70 degrees and in other ways treat like a tomato. Set out-of-doors after frosts in 30-inch rows, giving each plant 18 inches in a row. One ounce of seed gives 2,000 plants and one-quarter pound plants an acre. Number of days given is from setting plants to ripe fruit.

### ANAHEIM CHILI

80 Days

Plant 2 feet high, medium light green and medium heavy growth. Fruit 1 x 7 inches average, bright red from a deep green, slim, tapered to a point. Quite productive and medium hot in flavor. Largest of the milder chilis. Used as an all purpose type.

### BANANA OR HUNGARIAN YELLOW WAX

70 Days

Plant 2½ feet high, medium light green, upright and fairly bushy growth. Fruits long, slim, 1½ x 6 to 7 inches, ranging in color from a deep yellow to a bright orange to a bright red as they ripen, and tapering to a point. Very prolific, early, quite thick walled for the type and hot in flavor.

### SWEET BANANA

65 Days

Plant 20 to 24 inches tall, upright, dark green foliage, heavy. Fruit 6½ to 7½ inches long x 1½ inches. Sweet, medium flesh wall light yellow turning to bright red at maturity.



## PEPPER — Continued

### BELL OR BULL NOSE, SWEET

60 Days

Plant 2½ feet high, medium light green, upright, strong growing, bushy. Fruits 3 x 4 inches, squared, usually four lobes, inverted bell shape; flesh quite thick, mild in flavor and is a good garden strain for salads and stuffing.

### CALIFORNIA WONDER

76 Days

Plant 2½ feet high, medium light green, making a strong, upright growth. Fruits are large, 3½ to 4 x 5 inches, squared, usually four lobes, very thick walled, sweet and mild in flavor. From a deep green to a bright red in color.

### CALWONDER EARLY

69 Days

Fruits 3 and 4-lobed, upright, very attractive. Smooth, uniform, deep green changing to bright crimson at maturity; thick, sweet and mild. Packs well because of uniformity. Length about 4 inches; diameter at stem 3½ inches.

### CAYENNE — MAMMOTH LONG

70 Days

A long, slim, pointed pod, bright red in color when ripe, and extremely strong and pungent. Size ¾ to 1 inch in diameter, 5 to 6 inches long.

### PIMENTO

75 Days

Plant 2½ feet; medium dark, upright and very bushy. Fruits 2 x 2½ inches, heart shaped, smooth, without lobes or side ridges. deep green to brightest red. Very sweet and mild and a heavy producer. Excellent canning variety.

### RED CHILI

85 Days

Plants low growing and bushy. Fruits borne upright, very numerous, 2 to 2½ inches long, ⅜ inch thick, tapered; waxy pale yellowish-green, becoming rich red; very pungent.

### RUBY KING

70 Days

Plants are about 2½ feet high, vigorous, compact and productive. Fruits are 4 to 4½ inches long and of deep green color when young, bright red when ripe. The flesh is thick and mild flavored. One of the best varieties for mangoes or stuffed peppers.

### WORLD BEATER (RUBY GIANT)

73 Days

Fruits four-lobed, 5 inches long by 3½ inches in diameter; flesh very thick and mild. Exceedingly productive and a good shipper.

## PUMPKIN

**CULTURE.** The finer varieties of pumpkins are used for pies and the coarser ones for stock feeding. While the pumpkin may be grown very much as cucumbers are grown in a garden, they are more frequently planted in the field with corn, where several seeds are dropped in each fourth hill. Planted alone, six to ten seeds are covered one inch deep in hills eight to ten feet apart and thinned to two to four plants to the hill. One ounce plants twenty-five hills and two to four pounds of seed generously plants an acre. Number of days given is from planting to ripe fruit.

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## PUMPKIN — Continued

### CONNECTICUT FIELD

120 Days

The standard cornfield variety, producing large, orange colored pumpkins which average 25 pounds in weight, round and flat on ends with smooth, hard rind. Flesh is thick, dry and sweet — excellent for canning and stock feeding.

### GOLDEN CUSHAW

112 Days

The skin is golden yellow; vines very prolific; fruits rather small and slender.

### GREEN STRIPED CUSHAW

115 Days

Fruits very large with crooked neck. Color creamy white, irregularly striped or traced with green. Flesh light yellow, very thick, rather coarse but sweet. Very productive.

### WHITE CUSHAW

112 Days

It is similar to the Green Striped strain except somewhat smaller and the skin is pure white; also the neck is shorter than in other Cushaws.

### KENTUCKY FIELD

120 Days

The fruits will average 15 pounds and are 10 x 12 inches in size. They are a little similar to Large Cheese but are considerably thicker. They are not identical in our opinion. Kentucky Field is used very largely for canning and feeding stock. It is a very hardy, late variety. The outside color is yellow or light yellow.

### LARGE CHEESE

110 Days

It derives its name from its similarity to a cheese box; the fruits are very flat, ribbed, and it is buff or creamed color. Its averaged weight is 14 pounds and size is 5½ x 11½ inches. It is in wide use for canning purposes, keeps exceptionally well. It is prolific and disease resistant.

### MAMMOTH POTIRON OR KING OF THE MAMMOTH

120 Days

The flesh and skin are of a bright golden yellow color, flesh fine grained and of excellent quality. This enormous variety has been grown to weigh 100 pounds.

### SMALL SUGAR OR PIE

115 Days

A rather small but handsome variety. Shape round; skin deep orange colored; flesh fine grained, sweet flavored. Superior for pies.

## RADISH

**CULTURE.** Plant Radishes on a light soil if a choice is possible and every second week for a succession from the time the soil can be worked in spring till the first light frost. Plant in 12 to 18 inch rows, cover the seed one-half inch deep and permit ten radishes to grow to the foot; use 8 to 12 pounds of seed to the acre. Radish seed, which germinates quickly, may be sown with some slow germinating seed that the cultivation of that crop may begin the earlier or the quicker growing radish may be grown between the rows of some slow growing crop that later requires considerable space. Number of days given is from planting to roots of bunching size.

### CAVALIER

An attractive oblong globe shaped radish with short tops. Can be used out doors as well as for forcing. Is crisp and color is bright scarlet.



## RADISH — Continued

### CHAMPION

A king-sized edition of the Cherry Belle being developed by A. R. Zwaan and Son who developed the Cherry Belle. Its diameter is that of a silver dollar with a slim root. The quality is the best and it will stand a long time and to great size without getting pithy. It can be started in cold ground and still make good tops for bunching. Color is bright scarlet.

### CHERRY BELLE

22 Days

A very early short top variety well adapted for greenhouse or hotbed forcing. All-America Selections B.M. 1949. Shape, globular, small uniform, with a very fine root. Color, cherry red of a medium shade.

### CINCINNATI MARKET (Long Scarlet Short Top)

28 Days

Tops short and small; roots 6 to 7 inches long, pointed, bright scarlet; flesh white, crisp and mild.

### COMET

23 Days

Market and shipping radish. Although tops are short they are slightly heavier than Scarlet Globe. Stands unusually long before becoming pithy. Bunches well. All America Selections S.M. 1936. Shape, short oval, smooth. Color, rich scarlet; very attractive; flesh white, crisp, mild.

### CRIMSON GIANT

30 Days

Largest of the round reds. Tops medium small, very upright with medium light, short stem. Roots go up to 1½ inches without being pithy, globe shaped, deep red color, rather thick skin. Flesh white, tender and crisp.

### EARLY SCARLET GLOBE

24 Days

This excellent, bright, rich scarlet colored, globe shaped radish is the finest for forcing as it will bear the heat required for forcing without becoming pithy or losing its excellent flavor. Has a small top and certainly is the variety needed by the gardener who forces for early market. Also an excellent sort for outdoor planting.

### EARLY SCARLET TURNIP

26 Days

Early variety for forcing or outdoor culture. Tops medium; roots small, turnip shaped, almost round, bright scarlet in color, crisp and tender.

### FRENCH BREAKFAST

25 Days

Popular home garden and early market variety. Tops medium small; roots 1½ to 2 inches long, thicker towards bottom, scarlet with white tip; flesh white, crisp and of excellent quality.

### HAILSTONE

24 Days

The earliest white variety. Tops medium large; roots turnip shaped; flesh white, crisp and tender.

### SPARKLER WHITE TIPPED (White Tipped Scarlet Turnip)

26 Days

One of the handsomest of the turnip radishes and a great favorite in many large markets for early planting outdoors. Roots slightly flattened on the under side; color very deep scarlet with a white tip; flesh white and of the best quality.

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## RADISH — Continued

### WHITE ICICLE

27 Days

Without doubt the finest early white variety and very popular with home gardeners. Tops medium; roots 5½ to 6 inches long, tapering, pure white, very crisp and mild.

### WHITE STRASBURG

39 Days

Large, showy, half long sort. Roots 5 to 6 inches long, 1½ inches thick at the shoulder, tapering to a point; flesh white, firm and mildly pungent.

## RADISH — WINTER VARIETIES

The winter Radish is sown at late turnip planting time and used in the autumn or stored for winter like the turnip.

### CALIFORNIA MAMMOTH WHITE (White China)

61 Days

Large, heavy tops, light green in color. Roots large, 3 x 10 inches, stump rooted, thickest at the bottom end; small tap root. White skin; white flesh, crisp and hard but rather coarse grained and strongly flavored.

### LONG BLACK SPANISH

62 Days

One of the best winter varieties. Tops large and heavy; roots 7 to 9 inches long, 2 inches in diameter and tapering to a point; skin black; flesh white, very firm and pungent.

### ROUND BLACK SPANISH

60 Days

Roots round, sometimes top shaped, 3 to 4 inches in diameter; skin black; flesh white, firm, crisp and highly flavored. An excellent sort for winter as the roots keep a long time.

### ROSE CHINA WINTER

53 Days

Roots cylindrical or largest at the bottom, tapering abruptly to a small tip; skin very smooth and of a bright rose color; flesh firm, crisp and tender, quite pungent.

## RHUBARB

**CULTURE.** Rhubarb succeeds best in deep soil. The richer its condition and the deeper it is stirred the better. Sow in drills an inch deep and thin out the plants to six inches apart. In the Fall transplant the young plants into very highly manured and deeply stirred soil, setting them 4 to 6 feet apart each way and give a dressing of coarse manure every spring. The stalks should not be plucked until the second year and the plant never allowed to exhaust itself by running to seed.

### VICTORIA

Stalks large, rich red in color, very thick and tender. The best variety.

### POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.



## SALSIFY OR VEGETABLE OYSTER

**CULTURE.** Salsify succeeds best in a light, well enriched soil, which should be stirred to a good depth. Coarse and fresh manure should be avoided as it will surely cause the roots to grow uneven and ill-shaped. Sow early and quite deep, giving the general culture recommended for parsnips. The roots are perfectly hardy and may remain out all winter. Store a quantity for winter use in a pit or cellar in damp earth or sand.

### MAMMOTH SANDWICH ISLAND

Roots 7 to 8 inches long, 1 to 1½ inches thick; skin almost white; flesh mild and delicately flavored.

## SORREL

**CULTURE.** Sow in spring in drills 18 inches apart, in a rich soil, and keep the flower stems cut off as they appear. Remains in the ground, needs to be taken up and divided only once in 4 or 5 years. To be cut and cooked precisely like spinach. Also used for soups. Inasmuch as the hot sun tends to increase its acidity a Northern exposure is preferable.

### LARGE LEAVED FRENCH

Standard home garden and market sort, producing large, thick, bright green arrow-shaped leaves of mildly acid flavor.

## SPINACH

**CULTURE.** As early as the soil can be worked, sow it one-half inch deep in fourteen-inch rows, using one ounce of seed to one hundred feet, and in the second week will appear a tiny plant with two very narrow leaves that do not resemble the true leaves that follow. Cutting should begin forty-five days from sowing. It is impossible to put spinach on too rich soil, and nitrate of soda is used on it with profit.

### AMERICA

48 Days

A new variety from a cross between Viking and Bloomsdale Long Standing. Leaves dark green, savoyed and thick. Withstands heat better than others of this type and is slower to bolt.

### GIANT NOBEL THICK LEAF

42 Days

Plants large, vigorous and slow to run to seed. Very heavy yielder. Leaves medium green, thick and tender. The best thick leaved variety.

### KING OF DENMARK

44 Days

The best long season spinach, remaining two weeks longer than others before bolting to seed. Plant vigorous and spreading; leaves large, rounded, crumpled and blistered, deep green in color.

### NEW ZEALAND

This branching plant — a spinach in its use but not in its growth — frost-kills but grows luxuriantly in the summer heat. Plant these large seeds three in a hill, 3 x 2 feet apart or start the plant under glass and transplant.

### OLD DOMINION (BLIGHT RESISTNAT)

40 Days

A cross between Virginia Blight-Resistant Savoy and King of Denmark. Large, dark green, heavily crumpled leaves. Long standing and resistant to mosaic. Used mostly for an early spring crop.

**POWER-PAK MAKES GOOD SEED BETTER!**

## SPINACH — Continued

### SAVOY LEAVED BLOOMSDALE

39 Days

One of the best to plant in autumn for early spring use. Plant of upright growth with narrow, pointed leaves, which are curled like those of the Savoy Cabbage. It grows quickly to suitable size for use but soon runs to seed.

### SAVOY BLOOMSDALE BLIGHT RESISTANT (VIRGINIA SAVOY)

39 Days

Used principally in sections where blight occurs. Similar to Savoy Leaved or Bloomsdale but somewhat smoother in leaf and inclined to bolt to seed earlier.

### SAVOY BLOOMSDALE LONG STANDING

42 Days

Similar to the older type but with a thicker, more round and lighter colored leaf. Very slow to bolt to seed.

### VIKING (HEAVY PACK)

44 Days

This variety is excellent for market gardens and canning. Plant large, spreading, vigorous, long standing and heavily productive. Leaves very large, thick, dark green.

## SQUASH — SUMMER VARIETIES

**CULTURE.** The directions for the planting of Cucumbers can be followed with slight modifications for Squash or Cymling. Plant the Summer Squash in hills 4 feet apart and use before mature. Plant the Winter Squash in hills 6 to 8 feet apart; handle without bruising and store in a dry, moderately warm place for winter. Plant the seed generously and thin to 2 or 3 plants to a hill. One ounce of seed plants 25 hills and 2 to 4 pounds plants an acre. The Squash is recommended either for the table or the feed lot. Number of days given is from planting to ripe fruit.

### CASERTA

50 Days

A very early, bush type Cocozelle. Very prolific, leaves heavily cut. All America Selection G.M. 1949. Mature fruits nearly cylindrical, but slightly enlarged near blossom end, 15 inches long, 4 to 5 inches in diameter. Color, dull, very dark green striped on a light glossy green. Harvest when young. Flesh, yellowish white, thick, fine, well flavored.

### SUMMER CROOKNECK

50 Days

A standard early and productive summer variety. Fruits about a foot long, moderately warted and of a bright yellow color.

### EARLY PROLIFIC STRAIGHTNECK

Packs well for shipping. Popular with market gardeners and shippers. Plant is a bush type. Fruits 12 inches long, 2½ to 3½ inches in diameter, can be used when 6 inches long. It is straight, slightly smaller at the stem end. Cream color, splendid quality.

### EARLY WHITE BUSH, SCALLOPED

55 Days

Also called Cymling and White Patty Pan. It is the most popular of the white summer types of squash. The fruits are rather small, quite flat with ridged or scalloped edges. The vines are extremely prolific and disease resisting. Used when but a few days old they are very tender.

**FOR BETTER RESULTS INSIST ON POWER-PAK SEEDS.**



## SQUASH — SUMMER VARIETIES — Continued

### EARLY YELLOW BUSH, SCALLOPED

55 Days

It is similar in all respects to the Early White Bush except in the color of the skin, which is a golden yellow. It is not quite so prolific, nor is it as widely used.

### GIANT STRAIGHTNECK

55 Days

A distinct improvement on the Crookneck strain as it packs to better advantage for shipping. Popular with market gardeners and shippers. Plant is of bush type; fruits thicknecked, heavily warted, straight, lemon yellow in color; flesh thick, light yellow.

### ITALIAN VEGETABLE MARROW (Cocozezza)

60 Days

A distinct variety of squash of bush form. Fruit grows to a length of about 20 or more inches, with a diameter of 3 to 4 inches; skin smooth, of a dark green color, marbled with yellow or with paler green. All through Italy, where the squash is grown, the fruits are eaten when quite young, sometimes even before the flower has opened.

### BLACK ZUCCHINI

62 Days

Developed from Italian Marrow. Fruits are cylindrical, long, smooth, dark green-black; flesh greenish white at eating stage and of good flavor. Length about 13 inches; diameter 9 inches.

## SQUASH — WINTER VARIETIES

### ACORN, DES MOINES OR TABLE QUEEN

90 Days

A trailing variety producing acorn-shaped fruit with a thin, distinctly ribbed, dark green shell; 6 inches long by 4½ inches in diameter. Flesh light yellow and bakes well.

### JUMBO OR MAMMOTH TABLE QUEEN

95 Days

Fruits are 7 to 8 inches long and 5 to 5½ inches in diameter, weighing 2 to 3 pounds. Flesh is medium thick, pale orange, tender, dry, sweet, flavorful; good keeper.

### BANANA, BLUE

110 Days

Fruits are 18 to 20 inches long, weigh 10 to 12 pounds; skin medium hard and smooth, slate blue-green. Flesh is medium thick, orange-yellow, very fine textured; stores well.

### BANANA, PINK

105 Days

Similar to regular Banana but exterior deep pink. Fruits average 15 inches in length, 6½ inches in diameter, straight, pointed at blossom end, rounded at stem end. Flesh thick with small seed cavity.

### BOSTON MARROW

100 Days

Particularly valuable for canning. Fruits large, commonly 10 to 12 inches through, almost spherical, usually a trifle flattened at blossom end; skin slightly roughened, rich orange; rind hard and brittle; flesh thick, salmon-yellow.

### BUTTERCUP

100 Days

A fine new squash of excellent quality, 4½ x 6½ inches in size. The outside color is green with stripes and spots of grey. There is a heart-shaped protuberance at the blossom end. The dry, thick flesh, texture and keeping qualities of this squash are excellent.

## SQUASH — WINTER VARIETIES — Continued

### BUTTERNUT

90 Days

Fruits 8 to 10 inches long, bulbous at blossom end. Rind thin and tough, creamy yellow in color. Flesh very thick, fine grained, nutty and of excellent quality.

### DELICIOUS

105 Days

Fruits broad top-shaped, commonly 7 to 8 inches long; skin very dark green, fairly smooth; rind thin but hard; flesh extremely thick, bright yellow, fine grained and dry, without fiber and of highest quality.

### GOLDEN DELICIOUS

105 Days

Valuable for canners because of the high starch content of its flesh and the bright red-orange color of the exterior. In shape, size and season it is practically the same as the original Delicious.

### HUBBARD

100 Days

The standard winter squash. Fruits large, heavy and moderately warted, shell dark bronze-green showing more or less light green markings toward blossom end; flesh bright orange-yellow, fine grained, thick and dry.

### BLUE HUBBARD

110 Days

This excellent squash of the Hubbard type is light blue in color with hard shell and thick, fine grained flesh, which is very tender and by far the best flavored of the winter squashes. This variety is very popular in the east.

### RED OR GOLDEN HUBBARD

100 Days

This is a very distinct sort of the shape and general character of the Hubbard but a little smaller; color rich orange-red instead of the dark olive-green.

### WARTY HUBBARD

100 Days

Somewhat larger in size than the well known Hubbard and of equal quality but is more heavily warted and the shell is very dark green, almost black, in color. Our stock of this variety is exceptionally true.

## TOMATO

**CULTURE.** This crop responds well to fertilizer and soil should be enriched with complete fertilizer before planting. The Tomato requires one hundred days or more to mature from seed. As Tomatoes are killed by other than light frost, early Tomatoes should be started in hotbeds 2 months before they may be transplanted out-of-doors. Three weeks later these plants may be potted or given a space of 4 by 4 inches in the hotbeds. Before setting in the field, the plants should be gradually exposed to the outside conditions and the quantity of water given them decreased. Transplant on a cloudy day if possible, and water freely. Nitrate of soda may be given each plant at this time with profit. A space of 4 by 4 feet should be given each plant in the field or more for robust varieties, except that where they are carefully pruned and trained, which is unnecessary, they may be planted as close as 2 by 2 feet. One ounce of seed gives 2,000 plants. The number of days given is from setting plants to ripe fruit. Tomatoes may also be seeded direct in April. Drill seed about an inch apart in the row and plant a little Cabbage seed to mark rows for early cultivation. Thin after frost danger.

### BEEFSTEAK OR CRIMSON CUSHION

90 Days

A wilt resistant, late, main crop variety for home and market garden use. Plant open in habit of growth, heavy, rather light green, vigorous. Fruits large, flat, scarlet, rather smooth.



## TOMATO — Continued

- BONNY BEST — JOHN BAER — CHALK'S EARLY JEWEL** 75 Days  
Vines strong and vigorous; fruit deep scarlet, ripening to stem; flesh firm. A productive and very desirable early and main crop variety.
- BOUNTY OR VICTOR** 65 Days  
Fruits are scarlet, medium small, smooth, uniformly globular, shallow, small core, cracks under extreme variations of dry and wet weather. Very uniform in ripening. Vines are very small.
- BREAK O' DAY** 71 Days  
A wilt resistant tomato that is nearly as early as Earliana and as productive as Marglobe. Its fruits are large, smooth, red and globular, very similar to Marglobe but usually larger. Used whole for salads or stuffed.
- BRIMMER** 91 Days  
Similar to Ponderosa but larger, a single specimen often weighing 3 pounds. Fruit is solid and meaty, massive in size, delicious flavor, rich dark red color, and almost seedless.
- EARLIANA** 65 Days  
A very popular home garden variety. Fruits flattened, medium in size, deep-scarlet red, firm and fairly smooth.
- FIRESTEEL** 65 Days  
Vines small to medium. Fruit scarlet red, medium size, smooth, almost globular. Small core very firm and fleshy.
- GARDEN STATE** 84 Days  
Developed by Campbell Soup Company from crosses involving Pritchard, Marvel and Pink Topper. Plant vigorous, partially resistant to Fusarium wilt and late blight; fruits slightly globe shape, attractive in color and size, thick-walled and mild flavored.
- GREATER BALTIMORE** 83 Days  
Particularly valuable for canning; heavily productive. Fruits deep scarlet-red, large, deep but flat, smooth, very firm and solid.
- GULF STATE MARKET** 81 Days  
The best of the early purple fruited varieties. In season with Early Detroit while fruit is larger, smoother, more globe-shaped, very solid, free from cracking and productive.
- JUBILEE** 72 Days  
Fruits are bright, golden orange, deep globular, firm; the orange colored flesh is mild but of definite flavor and really delicious. Makes delicious juice. Ready in about 72 days after plants are set out in the garden.
- JUNE PINK** 67 Days  
Vine makes a very scant leaf growth 2 to 2½ feet tall. Fruit averages 3 inches in diameter, slightly flattened tip and bottom with smooth, thin, tough skin and medium thick wall with five large seed cells. Earliest of the pinks.

### POWER-PAK

Michael-Leonard's exclusive treatment, Power-Pak, makes good seed better. It assures gardeners of increased germination, better stands, faster growth rate, greater yields, and higher quality, because it reduces root rot, seed decay and damping off.

## TOMATO — Continued

### MANALUCIE

A new variety developed by Gulf Coast Experiment Station. Is a fine eating and shipping tomato. It is resistant to more plant diseases than any other variety up to this time. It is resistant to fusarium wilt, early blight, leaf mold, gray leaf spot with some tolerance of black spot, blossom end rot and nematode. Fruits are medium to large, deep globular and firm. Thick foliage protects fruits from scald.

### MARGLOBE

**80 Days**

Resistant to nail-head rust and fusarium wilt. Large, perfect globe-shaped fruits of a beautiful scarlet color. Its spreading habit of growth enables it to bear in great abundance.

### IMPROVED STONE (NORTON W. R.)

**84 Days**

Vines vigorous and productive; fruits large, smooth, solid and deep red in color, very heavy. This is a favorite canners' variety.

### OX HEART

**90 Days**

One of the largest of all tomatoes. Purple fruits often weigh up to 1½ pounds. Of distinct "ox heart" form, very solid, with few seed cells.

### PONDEROSA

**87 Days**

A purplish-pink tomato of largest size. Vine vigorous and very productive; fruit very solid, fairly smooth and of good quality.

### PRITCHARD OR SCARLET TOPPER

**76 Days**

Wilt resistant. Fruits large, smooth, globular, solid with thick walls and cross sections; color deep scarlet. Splendid home and market garden variety; excellent for shipping.

### RUTGERS

**72 Days**

Introduced by the New Jersey Agricultural Experiment Station. Fruits medium to large, similar in shape to Marglobe but slightly more flattened. Highly recommended as a second early maturing variety for canning and tomato juice.

### SIoux

**70 Days**

Developed at Nebraska Experiment Station. Plant relatively open with finely divided leaves. Fruit red, medium sized, almost globular, thick walled and practically free from hard core, juicy with good flavor, ripens uniformly.

### STOKESDALE

**72 Days**

An attractive second early variety. Fruits smooth, almost globe shaped; large pulpy core, solid flesh, free from cracking, good red color. Vines medium sized, coarse foliage which gives fair coverage, medium green, productive.

### VALIANT

**65 Days**

Plant is vigorous, medium in size and open. Fruits large for an early variety, globe shaped and of bright red color. Good yielder.

### YELLOW OR GOLDEN PONDEROSA

**90 Days**

Vines large and heavy; fruits very large, flat, deep yellow. A fine home garden variety.

### HERE'S WHAT POWER-PAK DOES:

Preserves Seed Vitality  
Protects Against Disease

Produces Better Stands  
Promotes Stronger Plants



## TOMATO — HYBRID

### STOKESCROSS NO. 4 (An F2 of the Hybrid)

75 Days

A brilliant F2 cross, medium early, bright red and very productive. Of all hybrids in our trial grounds, both F-2 and F-1, this one has been the highest yielding and the best in quality.

### WONDER BOY

68 Days

This hybrid (F1) tomato measures up to its catchy name. It was introduced in 1954, bred for extremely large size fruits and heavy yield. It has been tested extensively all over the United States. Fruits have uniform color, extremely large, deep globe, smooth and of excellent flavor, small blossom scar, free from cracking, scarlet red, very heavy fruit sets in large clusters. Vines are vigorous, large, uniform plants affording good cover, very prolific.

## TOMATO — SMALL FRUITED VARIETIES

### YELLOW HUSK OR GROUND CHERRY

85 Days

Vine makes a spreading open growth, light green in color; fruit is small,  $\frac{3}{4}$  inch, round, yellow in color, and is enclosed in a thin, paper-like husk that loosens as fruit ripens. Used for pies and preserves.

### RED PLUM

73 Days

A red fruited sort, resembling a plum in shape and size. Used as a novelty and for preserves.

### YELLOW PEAR

75 Days

Fruits 2 inches long; pear-formed, bright yellow.

### YELLOW PLUM

75 Days

Like the Red Plum in all ways except color, which is a bright yellow.

## TURNIP

**CULTURE.** While the main crop of Turnips is planted in July, more Turnips should be grown in early spring. Seed may be broadcast on the few soils freed of weeds but it is more advisable to sow in 1- or 2-ft. drills, cover less than one-half inch and thin to stand 6 inches apart in the row. Use 1 ounce of seed to 100 feet of row and 2 pounds to the acre. The Turnip requires one-half more seed when broadcast than in drills and a salad Turnip requires one-half more seed than the Turnip sown as a root crop.

### AMBER GLOBE (YELLOW GLOBE)

75 Days

One of the best varieties for a field crop for stock. Flesh yellow, fine grained and sweet; color of skin yellow with green top. Hardy, keeps well; a good cropper. Very popular in the south.

### COW HORN OR LONG WHITE

68 Days

This variety is pure white except for a little shade of green at the top. It is carrot-like in form, growing nearly half out of the ground and slightly crooked.

### GOLDEN BALL OR ORANGE JELLY

60 Days

Undoubtedly one of the most delicate and sweetest yellow fleshed turnips. Not of a large size but firm, hard and of most excellent flavor. Keeps well and is superior as a table variety.

## TURNIP — Continued

- EXTRA EARLY PURPLE MILAN** 40 Days  
Tops medium, upright growing, strap leaved; roots 3 inches, white with purple top, very flat; flesh sweet and crisp. Recommended for early spring planting.
- EXTRA EARLY WHITE MILAN** 40 Days  
Tops small and upright; roots 3 inches, pure white, very flat; flesh sweet and crisp. Used for forcing or early spring planting outdoors. Very early.
- POMERANIAN OR LARGE WHITE GLOBE** 75 Days  
This is one of the most productive kinds and in good, rich soil roots will frequently grow to 10 pounds in weight. It is of perfect globe shape; skin white and smooth; leaves large and dark green.
- PURPLE TOP STRAP LEAF** 45 Days  
Tops medium large, strap leaved. Roots 3 to 4 inches, flat, white with purple top. Flesh white, fine grained and sweet. Early variety.
- PURPLE TOP WHITE GLOBE** 60 Days  
An early, perfectly globe-shaped variety of good size and very attractive appearance. The roots are large, white with purple top. The flesh is white, fine grained and tender. They are best for table when about 3 inches in diameter but can be grown much larger for stock feeding. Best variety for market gardeners.
- SEVEN TOP FOR TURNIP GREEN (Southern Prize)**  
Standard, extremely hardy foliage turnip for table and forage use. Root woody and inedible; crown sends up numerous leafy shoots which are excellent for greens and for stock to graze on.
- SHOGGIN OR JAPANESE FOLIAGE**  
Very popular in the south. Quick growing. Tops 18 to 20 inches tall, bright green, strap leaved; roots globular, smooth, white and of excellent quality. Louse proof.
- WHITE EGG** 50 Days  
Top medium size, upright; roots white, egg-shaped with small tap root, 2½ to 3 inches. Good home garden variety.
- YELLOW ABERDEEN, PURPLE TOP** 75 Days  
Very hardy and productive, a good keeper; globe-shaped. Color pale yellow with purple top. Very firm in texture and closely resembling the Rutabaga in good keeping qualities. Good either for table or stock.

## RUTABAGA

**CULTURE.** Rutabaga, or Swedish Turnip, with their superior keeping qualities, had best be drilled a month earlier than other turnips, given 18 to 30-inch rows and thinned to stand six to twelve inches apart in the row.

- AMERICAN PURPLE TOP, IMPROVED** 90 Days  
Tops large, upright; roots 5 to 6 inches, yellow with purple top; flesh pale yellow, fine grained, sweet and tender.
- GOLDEN NECKLESS** 85 Days  
Resembles American Purple Top but with medium top and very small neck. Roots flattened globe in shape, yellow with purple top; flesh yellow, firm and of excellent quality.



## WATERMELON

**CULTURE.** For watermelon, follow our cultural directions for cucumbers, except that it is necessary to give the watermelon a space of eight to ten feet between hills, and thin the plants to two to the hill. One ounce plants twenty-five hills and three pounds of seed plant an acre. Number of days given is from planting to ripe fruit.

### BLACKLEE

**95 Days**

Developed by M. N. Walker of the Florida Experiment Station from Leesburg x Hawkesbury. Very resistant to Fusarium wilt. Fruits of Tom Watson type but somewhat thicker and shorter; rind dark green, thin but tough; flesh bright red, of good texture and flavor. Seeds black, medium size. Weight 30 pounds.

### CHARLESTON GRAY

**85 Days**

A new release by the Southeastern Vegetable Breeding Laboratory, U. S. Department of Agriculture, this fine melon is resistant to Anthracnose, Fusarium Wilt, Hollowheart, Gourdneck and Sunburn. An exceptionally high quality melon, this new variety is similar to Hawkesbury in appearance but superior shipping and eating qualities. The fine red flesh is reputed to be free from white heart. The seeds are stippled black. Fruits are 24 by 10 inches and weigh 30 to 35 pounds.

### COLE'S EARLY OR HARRIS EARLY

**80 Days**

The best of the extra early sorts. Fruits slightly oval with irregular mottled stripes of light and dark green. Flesh bright red, sweet and tender. A desirable variety where the season is short. It is hardy, productive and the largest of the early kinds.

### CONGO

**90 Days**

An Anthracnose resistant variety developed to permit normal development in the Gulf Coast and Southeastern states where Anthracnose frequently kills the vines preventing normal development of the melons. Yields well and has nice marketable fruits. A good shipper, not resistant to wilt and mildew. All America Selection B.M. 1949.

### DIXIE QUEEN WILT RESISTANT (MISSOURI QUEEN)

Fruit short, oval, 13 inches long, 10 to 11 inches in diameter. Color whitish light green with dark green stripes. Rind smooth, relatively thin, tough enough for easy handling and good shipping. Flesh rosy red, fiberless, fine grained, sweet. Seed, small white with brown tips.

### EARLY KANSAS OR RED RUSSIAN

**80 Days**

Large fruits, nearly round, bright green with broad wavy stripes of lighter green. Flesh bright red. Thin, tough rind. Brownish seed turning to buff when dry.

### FLORIDA FAVORITE

**88 Days**

A very large, long melon, mottled dark green with stripes or lighter shade. Rind thin but firm; flesh very bright, deep red, very sweet, tender and of excellent flavor. Finest flavored melon for home garden.

### FLORIDA GIANT, Black Diamond or Cannon Ball

**95 Days**

Fruits dark green, nearly round; flesh firm and red; of excellent quality. Ships well and is one of the best all-purpose varieties. Seed with heavy dark brown flecking on tan ground. Weight about 40 pounds.

**POWER-PAK MAKES GOOD SEED BETTER!**

## WATERMELON — Continued

### GYPSY OR GEORGIA RATTLESNAKE

94 Days

Fruit cylindrical, square at ends, smooth and distinctly striped and mottled light and dark green. Flesh bright scarlet and very sweet.

### HALBERT HONEY

85 Days

Fruit long, 12 x 18 inches, slightly tapered, dark green with lighter green veins or net. Flesh rich, bright red, fine grained, sweet and well flavored. Skin is thin and crisp; seed white with black or brown tip and rim. An excellent garden type.

### HAWKESBURY

85 Days

A wilt resistant shipping variety. Of the Irish Grey type; long and sloping toward either end. Flesh dark pink, of good quality. Seeds brownish black. Weight about 35 pounds.

### IRISH GREY

90 Days

Fruit is long oval, blunt at both ends, light greyish green color. Flesh is bright red, sweet, firm and very well flavored, with few seeds. The skin is thin but quite tough; seed white.

### KLECKLEY'S SWEETS IMPROVED—WONDER MELON

86 Days

Unsurpassed for home use or near markets. Fruit medium to large size, oblong, tapering slightly towards the stem end, dark green, often showing fine russetting. Flesh very bright, rich red, exceedingly sweet, crisp and tender. Seed white.

### KLECKLEY'S NO. 6

90 Days

A wilt resistant variety of high quality, same type as Kleckley's Sweet. Rind thin but tough, flesh free from veins or coarse strings.

### KLONDIKE, IMPROVED BLACK SEEDED

83 Days

For genuine merit, not surpassed by any other kind. Rind dark green with attractive bright red flesh. Seeds small and black.

### LEESBURG, W. R.

90 Days

A wilt resistant Kleckley's Sweets developed by the Florida Experiment Station. Fruits similar to Kleckley's Sweets but shorter and blocky ended. Rind dark green, flesh red, fine textured, very sweet. Seed white.

### MOUNTAIN HOOSIER

90 Days

Fruits very large, round oval with blunt ends; rind tough, dark green. Flesh bright red and sweet, of fine eating quality. Seeds white, edged with black. Weight 50 pounds.

### NEW HAMPSHIRE MIDGET (ICEBOX)

65 Days

A midget icebox type. Very early and very productive. Fruit 6 inches long by 5½ inches wide, nearly round. Thin rind, tender, light green with dark green mottling and striping.

### NORTHERN SWEET

75 Days

Fruits small, nearly round, medium green with dark green stripes; rind very thin. Flesh very deep red, crisp, sweet, and of good flavor. Seeds light brown with darker edge. Fruits weigh from 10 to 12 pounds.



## **WATERMELON — Continued**

### **STONE MOUNTAIN**

**88 Days**

A very large, medium dark green, round melon of excellent quality. Flesh highly colored, very solid, with fewer seeds than most watermelons. It has gained a well deserved popularity in the south where the fruits frequently attain a weight of 60 to 80 pounds. The rind is tough enough to stand handling for nearby markets but will not stand long distance shipping.

### **STONE MOUNTAIN NO. 5 (Wilt Resistant)**

**85 Days**

Highly resistant to Fusarium Wilt. Fruit is similar to regular Stone Mountain but runs a little smaller in size. Rind thick, and flesh bright pink. Seeds white spotted with black.

### **STRIPED KLONDIKE BLUE RIBBON**

**80 Days**

Fruits medium sized thick cylinder about 20 pounds, irregular green striped on light green background, rind moderately tough, good home garden variety. Flesh dark red, fine quality, crisp and sweet.

### **SWEETHEART**

**89 Days**

This melon is large, handsome, heavy and productive. The shape is oval and the color mottled light to a very light green. Flesh bright red, solid but tender and very sweet.

### **TOM WATSON**

**91 Days**

A large melon similar in shape and splendid quality to Monte Cristo but averaging larger in size and with a tougher rind, making it especially adapted to shipping. The rind is dark green with distinct, fine veining; flesh is rich red, sweet and tender. One of the best shipping melons.

### **WINONA**

**95 Days**

Resembles a long type of Florida Giant. Fruits large, short cylindrical, blunt-ended, with tough, dark green rind. Flesh bright red, solid and sweet. Seeds black. Weight 40 pounds.

FLOWER PLANTING GUIDE

Common Name and Planting Time*	Principal Flower Color	Use**	Height	Average Days to Germinate	Flow- ering Time***	Preferred Location
Ageratum	Blue, Violet, Rose, White	A-E-C	4"-12"	6-10	2-3	Fall Sun or Half Shade
Alyssum	Blue, White, Yellow	A-B-E-R	8"-10"	10-20	2-3	Sunny
Aster LF	Blue, Lavender, Pink, White	A-B-C	12"-30"	7-15	3	Full sun; Rotate location of planting
Bachelor's Button LF	Blue, White, Pink	A-B-C	12"-24"	15	1-2	Tolerates partial sun and poor soil
Balsam	Pink, Red, Salmon, Lav., White	A-B-C-E	20"-28"	10-14	2	Thrives on partial shade
Black-Eyed Susan	White, Buff, Orange	A-B-C	2 feet	10-14	2-3	Sun or half shade
Calendula	Yellow, Apricot, Orange	A-C-R	12"-16"	12-14	1-2	Tolerates poor soils—Easy culture
Calliopsis	Yel'w, Orange, Maroon, Crimson	A-C-WB	18"-24"	10-14	1-2	Full sun—Tolerates poor soil
Candytuft	Crimson, Lavender, White	A-B-C	6"-18"	5-10	1	Tolerates some shade
Canterbury Bell, Perennial EF	Blue, Pink, White	P-B-C	24"	10-15	1-2	Sun or half shade
Cardinal Climber	Red, White	A-V	12 feet	10-20	2-3	Full sun
Carnation LF	Red, Salmon, Rose, Yel'w, White	A-C	15"-18"	10-12	2-3	Good soil—Full sun
China Pinks EF	Salmon, Rose, Red, White	A-C-R	4"-15"	5-10	2-3	Good soil—Full sun
Clarkia	Pink, Rose, Purple, White	A-B-C-R	24"	12-18	1-2	Tolerates some shade, cool, moist soil
Celosia (Cockscomb) LF	Red, Yellow	A-V-C-WB	15"-30"	20-25	2-3	Full sun—Light soil
Coreopsis EF	Yellow	A-B-C	18"-36"	10-20	1-2-3	Tolerates drought—Warm place
Cosmos	Rose, Yel'w, Orange, White, Pink	A-C-TB	36"-40"	5-15	2-3	Well drained—Sunny spot
Cypress Vine	Red, White	A-V	12 feet	10-20	2	Full sun
Dahlia	Orange, Crimson, Lav., Yellow	A-B-C	15"-20"	10	2-3	Cool, moist location—full sun
Daisy EF	Rose, Red, White	P-B-C-R	24"-36"	10-14	1-2-3	Well drained soil—full sun
Delphinium EF	Blue, Lavender, White	A-C-R-TB	4-5 feet	15-21	1-2	Full sun—rich soil
Four O'Clock	Red, Pink, Yellow, White	A-TB	2-2½ feet	14	3	Well drained soil—Full sun
Fox Glove EF	Rose, White	P-R-TB	24"	10-20	2-3	Semi-shade
Gaillardia EF	Red, Yellow, Orange, Maroon	P-B-C-R	24"	15-21	1-2-3	Light soil—full sun
Godetia	Pink, Blue, White, Lavender	A-B-C	24"	15	1-2	Moist, cool location—Full sun
Gourds	Mixed	A-V	12-15 feet	14	3	Full sun
Gypsophila Baby Breath LF	White	P-B-C-R-WB	24"	10-14	1-2-3	Do not move
Hollyhock EF	Scarlet, Yellow, Pink, White	BA-R-TB	5-6 feet	21	2	Well drained soil—Full sun
Hyacinth Bean	Purple, White	A-V	10 feet	10-14	2-3	Full sun
Larkspur EF	Blue, Rose, Lav., Red, White	A-B-C	24"-36"	21-30	1-2	Do not move—full sun or half shade



Lobelia	Blue	A-E	4"-8"	10	2	Full sun—Good soil
Lupine	Blue, Rose, White	A-B-C	24"	10-15	2-3	Well drained soil—Full sun
Marigold	Yellow, Orange, Red, Bronze	A-B-C-TB	8"-30"	8-10	2-3	Full sun
Mignonette	Bronze, Copper	A-B-C	12"	12-15	2	Full sun—Do not move
Moonflower	White	A-V	12 feet	5-8	2-3	Full sun or half shade
Morning Glory LF	Red, Blue, White	A-V	10-15 feet	10-15	2-3	Full sun—Well drained soil
Moss Rose LS	Pink, Red, Salmon, Yel'w, White	A-B-E-R	6"-8"	14	1-2-3	Tolerates dry soil—Heat
Mourning Bride	Various	A-B-C	2 feet	14	2-3	Full sun or half shade
Nasturtiums	Rose, Salmon, Red, Yellow	A-B-C	12"-36"	12-14	2-3	Tolerates poor soil—some shade
Pansy EF	Yellow, Blue, Purple, Red, Bronze, White	BA-B-C-E-R	6"-8"	14	1-2	Moist cool soil; tolerates some shade
Petunia	Red, Pink, Blue, Salmon, etc.	A-B-E	12"-24"	10-21	2-3	Full Sun—Start Hybrids indoors
Phlox	Red, Rose, Pink, Violet, White	A-B-C	12"-15"	10-14	2-3	Full sun—Well drained soil
Poppy EF	Pink, Salmon, Scarlet, Gold	A-B-R	12"-30"	10-14	1-2	Full sun—Do not move
Ricinus (Castor Bean)	Large Foliage	A-TB	3-10 feet	14-21	3	Full sun
Salpiglossis	Yellow, Crimson	A-B-C-TB	24"-30"	14-21	2-3	Full sun
Salvia LF	Red, Blue	A-B-C	24"	30	2-3	Tolerates some shade—Start early indoors, set out when weather becomes favorable
Scarlet Flax	Bright Red	A-C-F-WB	18"	6-10	2-3	Full sun
Scarlet Runner	Bright Red	A-V	10 feet	6-10	2-3	Full sun
Snapdragon	Scarlet, Yellow, Rose, Pink, Purple, White	A-B-C	18"-36"	10-14	2-3	Full sun—Good soil
Stock	Red, Blue, Yellow, Purple, Pink, White	A-B-C	12"-24"	7-10	2-3	Full sun—Good soil
Strawflower	Crimson, Yellow, Rose, White, Yellow, Red, Crimson	A-C-WB	24"-30"	10-14	3	Full sun
Sunflower	Salmon, Pink, Blue, Scarlet, Lavender, Cream, Red, White	A-C-TB	5 feet	6-10	2-3	Full sun
Sweet Pea LF	Bright Shades	A-C-V	6 feet	10	1	Well drained fertile soil—Full sun
Sweet William EF	Orange, Scarlet	A-B-C	18"-24"	6-8	1-2	Tolerates some shade
Tithonia Torch	Crimson, Pink, Lavender, Blue, Salmon, Red, Scarlet	A-C-TB	4 feet	14	2-3	Full sun
Verbena LF	Crimson, Orange, Pink, Red, Yellow	A-B-C-E-R	10"-12"	14-21	2-3	Warm, dry soil—Full sun
Zinnia		A-B-C	12"-36"	6-12	2-3	Well drained—Full sun

## \*Planting Time Code

LS—Late Spring (June 1)  
 EF—Early Fall (July 20)  
 LF—Late Fall (After 1st hard frost)  
 All varieties not coded and Early and Late Fall varieties can be planted in Early Spring.

## \*\*Use

E—Edging  
 B—Mass bedding and border  
 C—Cut flowers  
 V—Vine  
 R—Rock Garden

## TB—Tall Background

WB—Winter Bouquet  
 A—Annual  
 BA—BiAnnual  
 P—Perennial

## \*\*\*Flowering Time

1—Early  
 2—Mid-Season  
 3—Late

## VEGETABLE PLANTING GUIDE

	Rows Apart, Feet	Plants Apart In Row, Inches	Planting Depth, Inches	Seed For 50 Feet	Seed For One Acre, Pounds	Seeds Per Ounce	Days To Germi- nate	Days To Yield	From Plants or Seeds
Asparagus	2½	20	6	½ oz. 30 Plants		1,500	8-10	2 Years	P
Beans, Bush	2-2½	3-4	1½	4 oz.	60-75	60-90	5-8	50-70	S
Beans, Pole	3-4	9 (or hills)	1½	4 oz.	30-35	70-120	5-8	65-80	S
Lima Beans, Bush	2-2½	3-4	1½	4 oz.	30-50	20-70	5-8	65-75	S
Lima Beans, Pole	3-4	9 (or hills)	1½	4 oz.	30-40	20-65	5-8	80-90	S
Garden Soybeans	2-2½	3-4	1½	4 oz.	50-75	50-70	5-8	75-100	S
Beet	1½-2	3-4	½	½ oz.	4-6	1,500	7-10	60-75	S
Beet, Chard	2	15	½	½ oz.		1,200	7-10	50 and on	S
Broccoli	2	18	¼	1 pkt.	¼	9,000	6-9	70-80	P
Brussels Sprouts	2	18	¼	1 pkt.	¼	8,000	6-9	70 and on	P
Cabbage, Early	2	12	¼	1 pkt.	¼	8,500	6-9	65-75	P
Cabbage, Late	2	18	¼	1 pkt.	¼	8,500	6-9	80-100	P
Chinese Cabbage	2	12	¼	1 pkt.	2	7,000	6-9	75-85	S
Carrot	1½	3	¼	1 pkt.	2-3	25,000	12-18	60-75	S
Cauliflower	2	18	¼	1 pkt.	¼	10,000	5-10	55-65	P
Celeriac	2	4	⅛	1 pkt.	¼	50,000	15-20	90-120	S
Celery	2-3	5	⅛	1 pkt.	¼	50,000	15-20	120-150	S
Chicory, Witloof	2	10	¼	1 pkt.	3	17,000	8-12	For Winter	S
Collard	2½	24	¼	1 pkt.		8,000	6-9	90 and on	S
Corn, Early	2½	9	1	1 oz.	8-10	100-200	5-8	70-80	S
Corn, Main Crop	3	12	1	1 oz.	8-10	100-200	5-8	80-95	S
Cucumber	4	24	¾	1 pkt.	2	1,000	5-8	60-70	S
Egg Plant	3	30	½	1 pkt.	¼	6,000	10-12	70-85	P
Endive	1½	9	¼	1 pkt.	4-5	15,000	8-10	70-80	S



Kale	2½	24	¼	1 pkt.	4-5	7,500	6-9	70-80	S
Kohl-rabi	2	8	¼	1 pkt.	4-5	8,000	6-9	55-65	S
Leek	1½	6		1 pkt.	3-4	10,000	7-10	120-150	S
Lettuce, Leaf	2	12	¼	1 pkt.	3	20,000	6-8	45-50	S
Lettuce, Head	2	12	¼	1 pkt.	3	20,000	6-8	50-70	P
Muskmelon	5	48	1	1 pkt.	3-4	1,200	7-12	80-100	S
Mustard	2	9	¼	1 pkt.	4	15,000	5-8	60-75	S
Okra	3	15	1	½ oz.	8	500	8-12	50-60	S
Onion, Seed	1½	3-4	½	1 pkt.	3-4	8,000	7-10	90-110	S
Parsley	1½	4	¼	1 pkt.	4	15,000	15-20	85-100	S
Parsnip	1½	4	½	1 pkt.	4	6,000	15-20	80-100	S
Peas	2-3	1-2	1	½ lb.	90-180	90-150	7-10	60-80	S
Pepper	2½	24		1 pkt.	¼	4,000	8-10	65-80	P
Potato	3	12	4	3 lbs.	700		8-12	80-120	P
Potato, Sweet	4	20	4	3 lbs. or 30 plants	6,000 Plants			120-140	P
Pumpkin	8	60	1		3-4	100	7-12	110-130	S
Radish	1	1-2	½	1 pkt.	10-12	3,500	4-6	25-60	S
Rhubarb	4	48	¼	10 plants	2-3 for plants			2-3 Years	P
Salsify	1½	2	¼	1 pkt.		4,000	7-12	140-180	S
Spinach	1½	6	¾	1 pkt.	15-25	2,500	9-12	40-50	S
Spinach, N. Z.	3	20	1	1 pkt.		350	10-12	70-80	S
Squash, Bush	4	36	1	1 pkt.	6	300	7-10	55-65	S
Squash, Vining	6	60	1	1 pkt.	4	100	7-10	65-120	S
Tomato	3-4	36	½	1 pkt.	¼	20,000	7-12	75-90	P
Turnip	1½	4-6	¼	1 pkt.	2-3	9,000	5-10	50-80	S
Turnip, Rutabaga	2	6	¼	1 pkt.	1-2	8,000	5-10	80-90	S
Watermelon	8	96	¾		3-4	200-300	8-12	75-95	S

HELPFUL FACTS ABOUT TURF GRASSES

Kind	Days to Germ-inate	Seeds per lb. Omit- ted	Seed- ing per 1,000 Sq. Ft.	Life	Tex- ture	Gen- eral Utility	For Shade Areas	For Heavy Wear	For Golf Fair- ways	For Quick Cover	For Slopes and Ter- races	For General Desirability
KENTUCKY BLUEGRASS	28	2,400,	3 lbs.	Perm.	Fine	Best	Poor	Good	Good	No	Good	Best
MERION BLUEGRASS	28	3,500,	2 lbs.	Perm.	Fine	Best	No	Best	Best	No	Good	Finest
CHEWINGS FESCUE	21	450,	8 lbs.	Perm.	Very Fine	Good	Good	Good	Good	No	Fair	Excellent
CREEPING RED FESCUE	21	400,	8 lbs.	Perm.	Very Fine	Good	Good	Good	Good	No	Fair	Excellent
BENT	28	6,000,	3 lbs.	Perm.	Very Fine	Fair	No	Best	Best	No	No	Finest
POA TRIVIALIS	28	2,200,	4 lbs.	Perm.	Fair	Fair	Best	Fair	Fair	No	Fair	Best Shade
KENTUCKY 31 ALTA FESCUE	10	375,	8 lbs.	Perm.	Coarse	Poor	Fair	Best	Poor	Fair	Fair	Hard Usage
MEADOW FESCUE	8	250,	10 lbs.	Perm.	Coarse	Fair	Poor	Fair	No	Fair	No	Fair
CANADA BLUEGRASS	28	2,400,	3 lbs.	Perm.	Coarse	Poor	Good	Good	No	No	Good	Terrace Shade
RED TOP	6	4,100,	3 lbs.	3 Yrs.	Fine Very	Poor	No	Fair	Fair	Good	No	Nurse Only
PERENNIAL RYEGRASS	8	210,	10 lbs.	3 Yrs.	Coarse	Fair	Fair	Fair	Good	Best	No	Quick Cover
COMMON RYEGRASS	8	225,	10 lbs.	1 Year	Coarse	No	No	Fair	No	Best	No	Quick Cover and Nurse
TIMOTHY	8	1,170,	5 lbs.	3 Yrs.	Fine	No	Fair	No	No	Good	No	Quick Cover
WHITE CLOVER	10	700,	6 lbs.	Perm.	None	Good	Fair	Best	No	No	No	Good If You Like It



## LAWN SEED

There is nothing that adds more to the attractiveness of a home than a beautiful lawn — not only does it improve the beauty, it increases the cash value of the property.

To have a good lawn, a mixture of good permanent grasses is a must; however, this in itself is not all. The soil should be in good physical condition, well drained and high in fertility. With these essentials a mixture should give good results if seeded in the late summer. A late summer seeding has an advantage over weeds because few weeds germinate at this time. It also gives the seedling a longer growing period in which to establish a stronger, larger, root system before hot weather the next year. If the seeding cannot be done in the late summer, it should be done as soon as the soil is ready to work in the spring.

Michael-Leonard Company will gladly assist you with your lawn problems. We will give you complete seeding instructions upon request and recommend one of the following Michael-Leonard mixtures to you.

**MICHAEL-LEONARD'S FINEST MERION KENTUCKY BLUE-GRASS MIXTURE:**—Contains 40 percent Merion Kentucky Bluegrass, Chewings Fescue, Red Top and Highland Bent. This mixture will give you a lovely Merion lawn in a short time.

**M-L CHICAGO PARKS:**—A mixture of permanent grasses contains a high percentage of Kentucky Bluegrass, especially adapted for the North Central States.

**M-L GREEN MANOR:**—Here is a mixture that will give a good permanent lawn, but will still give quick coverage. This is a 100 percent perennial lawn seed mixture.

**M-L PARKWAY:**—As low priced as a good all perennial can be, contains more high quality perennial grasses than any inexpensive mixture we know of.

**M-L SHADY NOOK:**—A formula designed to give an excellent turf in deep shade and in poor or sandy soil.

**M-L QUICK GROW:**—For quick growth and low cost we recommend this mixture containing Bluegrass, Creeping Red Fescue, Perennial Ryegrass and Domestic Ryegrass.

**M-L ECONOMY GREEN:**—For the economical customer that desires a fast lawn we suggest this mixture of Kentucky Bluegrass, Kentucky 31 Fescue, Perennial Ryegrass and Domestic Ryegrass.

All Michael-Leonard mixtures are treated with our exclusive Power-Pak with Booster added. The results of this treatment are outstanding.



REFERENCE TABLES

QUANTITY OF SEEDS REQUISITE TO PRODUCE A GIVEN  
NUMBER OF PLANTS AND SOW AN ACRE

	Quantity Per Acre		Quantity Per Acre
Artichoke, 1 oz. to 500 plants	6 oz.	Hemp	½ bu.
Asparagus, 1 oz to 800 plants	4 lbs.	Horse-Radish Roots	10,000 to 15,000
Asparagus Roots	1000 to 7250	Kale, 1 oz. to 5,000 plants	4 lbs.
Barley	2 bu.	Kohl-Rabi, ½ oz. to 100 ft. of drill	4 lbs.
Beans, Dwarf, 1 lb. to 100 ft. of drill	60 lbs.	Leek, 1 oz. to 100 ft. of drill	4 lbs.
Beans, Pole, ½ lb. to 100 hills	30 lbs.	Lettuce, ¼ oz. to 100 ft. of drill	3 lbs.
Beet, Garden, 1 oz. to 100 ft. of drill	7 lbs.	Melon, Musk, 1 oz. to 100 hills	3 lbs.
Beet, Mangel, 1 oz. to 100 ft. of drill	5 lbs.	Melon, Water, 4 oz. to 100 hills	3 lbs.
Broccoli, 1 oz. to 5000 plants	2 oz.	Nasturtium, 2 oz. to 100 ft. of drill	15 lbs.
Brussels Sprouts, 1 oz. to 5000 plants	3 oz.	Okra, 2 oz. to 100 ft. of drill	10 lbs.
Buckwheat	1 bu.	Onion Seed, ½ oz. to 100 ft. of drill	4 to 5 lbs.
Cabbage, 1 oz. to 4000 plants	2 oz.	Onion Seed for sets	40 to 80 lbs.
Carrot, 1 oz. to 100 ft. of drill	3 to 4 lbs.	Onion Sets, 1 qt. to 40 ft. of drill	8 bu.
Cauliflower, 1 oz. to 2500 plants	4 to 6 oz.	Parsnip, ½ oz. to 100 ft. of drill	3 lbs.
Celery, 1 oz. to 6000 plants	4 oz.	Parsley, ¼ oz. to 100 ft. of drill	3 lbs.
Chicory	4 lbs.	Peas, Garden, 1 lb. to 100 ft. of drill	1 to 3 bu.
Clover, Alsike and White Dutch	6 lbs.	Peas, Field	2 bu.
Clover, Crimson	10 to 15 lbs.	Pepper, 1 oz. to 1500 plants	4 oz.
Clover, Large Red and Medium	8 to 12 lbs.	Pumpkin, 4 oz. to 100 hills	3 to 4 lbs.
Collards, 1 oz. to 5000 plants	4 oz.	Radish, ⅔ oz. to 100 ft. of drill	8 to 12 lbs.
Corn, Sweet, 1 lb. to 2000 hills	7 to 10 lbs.	Rye	1½ bu.
Cress, ¾ oz. to 100 ft. of drill	12 lbs.	Salsify, ¾ oz. to 100 ft. of drill	8 lbs.
Cucumber, 1 oz. to 100 hills	1 to 3 lbs.	Spinach, 1 oz. to 100 ft. of drill	10 to 15 lbs.
Egg Plant, 1 oz. to 2000 plants	4 oz.	Summer Savory	¾ lb.
Endive, 1 oz. to 100 ft. of drill	3 to 5 lbs.	Sunflower	8 lbs.
Grass, Blue, Kentucky	30 to 40 lbs.	Squash, Summer, 4 oz. to 100 hills	2 lbs.
Grass, Hungarian and Millet	25 lbs.	Squash, Winter, 8 oz. to 100 hills	2 lbs.
Grass, Mixed Lawn	100 lbs.	Tomato, 1 oz. to 2000 plants	2 oz.
Grass, Red Top, Fancy, Clean	8 to 10 lbs.	Tobacco, 1 oz. to 5000 plants	2 oz.
Grass, Timothy	10 lbs.	Turnip, 1 oz. to 100 ft. of drill	2 lbs.
Grass, Orchard, Perennial Rye and Wood Meadow	2 bu.	Vetch	2 bu.

MEASUREMENT OF AN ACRE

The following will be found useful in arriving at accuracy in estimating the amount of land in different pieces of ground under cultivation: 5 yards wide by 968 yards long contains 1 acre, as do also the following measurements: 10 yards wide by 484 yards long; 20 yards wide by 242 yards long; 40 yards wide by 121 yards long; 70 yards wide by 69½ yards long; 60 feet wide by 726 feet long; 110 feet wide by 396 feet long; 120 feet wide by 363 feet long; 220 feet wide by 198 feet long; 240 feet wide by 181½ feet long, and 440 feet wide by 99 feet long.

NUMBER OF PLANTS OR TREES TO THE ACRE AT GIVEN DISTANCES

Dis. Apart	No. Plants	Dis. Apart	No. Plants	Dis. Apart	No. Plants
12x 1 in.	522,720	30x16 in.	13,068	48x36 in.	3,630
12x 3 in.	174,240	30x20 in.	10,454	48x48 in.	2,723
12x12 in.	43,560	30x24 in.	8,712	60x36 in.	2,901
16x 1 in.	392,040	30x30 in.	6,970	60x48 in.	2,178
18x 1 in.	348,480	36x 3 in.	58,080	60x60 in.	1,743
18x 3 in.	116,160	36x12 in.	14,520	8x 1 ft.	5,445
18x12 in.	29,040	36x18 in.	9,680	8x 3 ft.	1,815
18x18 in.	19,360	36x24 in.	7,260	8x 8 ft.	680
20x 1 in.	313,635	36x36 in.	4,480	10x 1 ft.	4,356
20x20 in.	15,681	42x12 in.	12,446	10x 6 ft.	726
24x 1 in.	261,360	42x24 in.	6,223	10x10 ft.	435
24x18 in.	15,520	42x36 in.	4,148	12x 1 ft.	3,630
24x24 in.	10,890	48x12 in.	10,890	12x 5 ft.	736
30x 1 in.	209,088	48x18 in.	7,790	12x12 ft.	302
30x 6 in.	34,848	48x24 in.	5,445	16x 1 ft.	2,722
30x12 in.	17,424	48x30 in.	4,356	16x16 ft.	170





This neat, eye-appealing cabinet will modernize and facilitate the operations of any seed department.

Thirty-two varieties of small seed can be displayed in the attractive 2-lb. glass jars and 18 varieties of beans, peas, and corn in the drawers when the dividers are used. The center provides a place to display packets which a dealer can fill in advance from the glass jars—this gives the customers a chance to serve themselves.

A set of hardwood dips with a color chart comes with each cabinet. These dips have colored handles to correspond with the measuring chart—this simple color system and long handles makes the dips easy to use. Length of cabinet, 54¾ inches; depth, 30 inches; and height, 58¾ inches.

Complete cabinet, 3 dozen jars, and set of dips-----	\$198.50 (Terms Available)
Cabinet F.O.B. Sioux City, Iowa-----	Shipping Weight—300 Pounds.
Jars F.O.B. Glassport, Pennsylvania-----	Shipping Weight— 84 Pounds.
Dips F.O.B. Sioux City, Iowa-----	Shipping Weight— 2 Pounds.



New Revolutionary Discovery Of  
MICHAEL-LEONARD Research . . .

# POWER-PAK\*

After years of careful research, we have combined — in POWER-PAK — four powerful chemicals which were found to be amazingly beneficial to seed germination and plant growth. POWER-PAK makes good seed better! POWER-PAK'd Michael-Leonard Seed now assures gardeners of increased germination, better stands, faster growth rate, greater yields, high quality. And it reduces root rot, seed decay and damping off.

To get your garden off to a good start, use Michael-Leonard POWER-PAK'd Seed!

## Here's How POWER-PAK Pays Off!

Compare results! 30% to over 100% more value for your money . . . with POWER-PAK'd Michael-Leonard Seed.

### NORMAL PLANTS FROM ONE PACKET OF SEED

	without Power-Pak	with Power-Pak	percent increase
TOMATO .....	52	85	63%
CARROT .....	110	162	47%
CABBAGE .....	54	75	39%
BEETS .....	42	56	33%
CUCUMBER .....	13	56	330%
LETTUCE .....	30	76	153%
SWEET CORN .....	42	56	33%
RADISH .....	53	69	30%
TURNIP .....	190	287	51%
WATERMELON .....	14	29	107%

POWER  
PAK'd  
SEEDS

TREATED  
SEED

UNTREATED  
SEED

IDENTICAL CUCUMBER  
PLANTINGS

This unretouched photograph shows the difference in growth between Cucumber Seed treated with POWER-PAK, and ordinary untreated seed. Note the fine stand, the thicker, more luxuriant growth of the treated seed. POWER-PAK sterilizes seed against disease, stimulates early root growth, insures a more adequate root system—and has increased up to 150% the number of healthy sprouts from a single package of garden seed.